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ABSTRACT

Based on a study of how eight states have pursued educational reform, this booklet reviews new issues facing school finance as a result of the recent upsurge of interest in educational improvement. The booklet has four sections. The first section discusses changing state fiscal and political contexts within which reforms are being debated. Section 2 briefly describes (and notes the costs of) the reform packages enacted or being enacted in Arkansas, California, Florida, Illinois, South Carolina, Tennessee, Texas, and Utah. Section 3 compares and contrasts the treatment by these eight states of specific elements of reform, and analyzes cost, finance, and allocation implications. The elements considered are teacher compensation, school schedules, class size, graduation requirements, student testing, preschool programs for disadvantaged children, school improvement programs, merit schools, and school finance reform. The fourth section summarizes the new school finance issues flowing from the reforms described in section 3 as well as finance issues that are part of broader economic and social changes across the country. An instrument for surveying cost and allocation issues related to education reform programs is appended. References in 14 relevant topic areas are cited. (PGD)

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Education Finance in the States: 1984

Report No. F84-1

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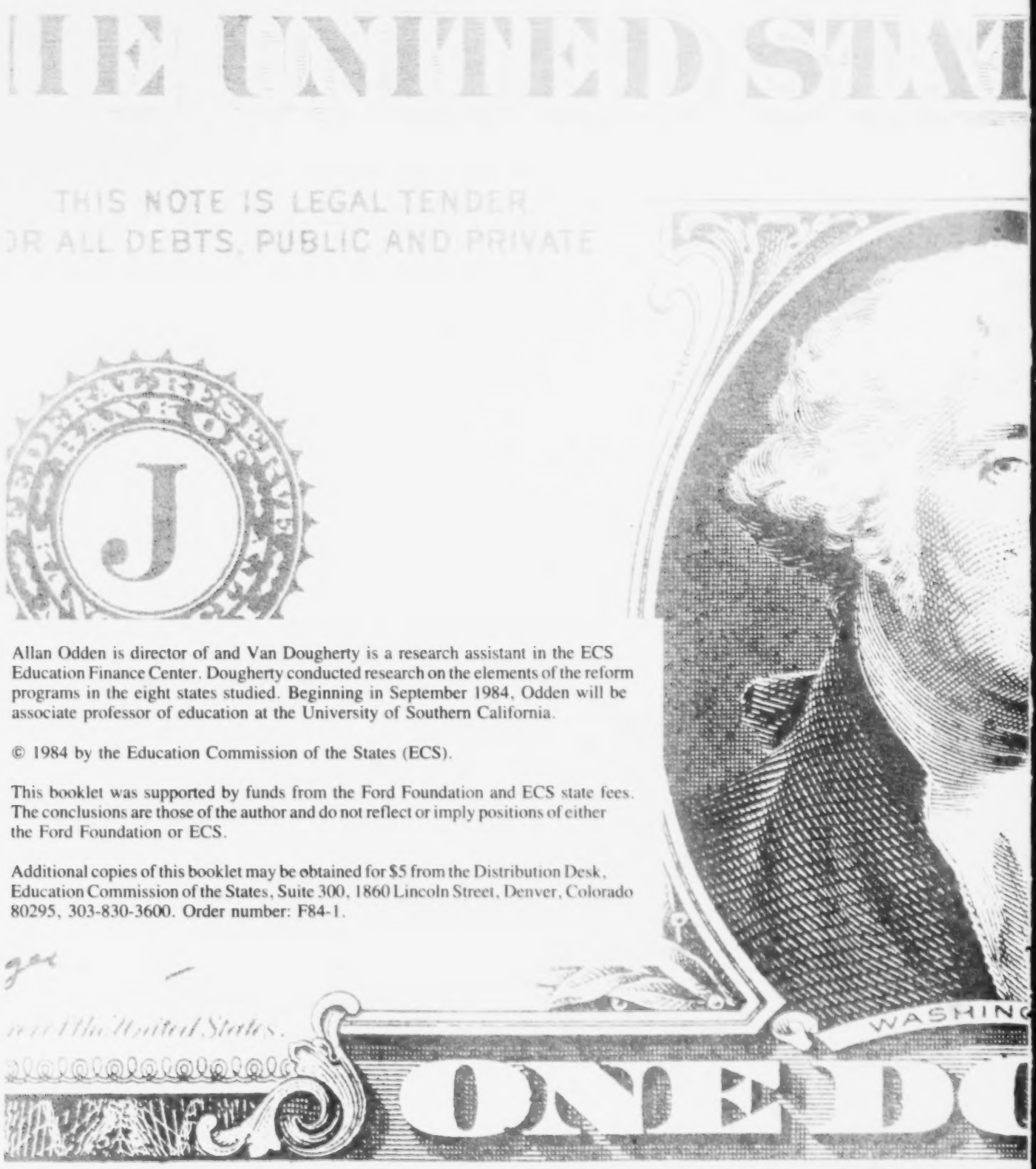
June 1984



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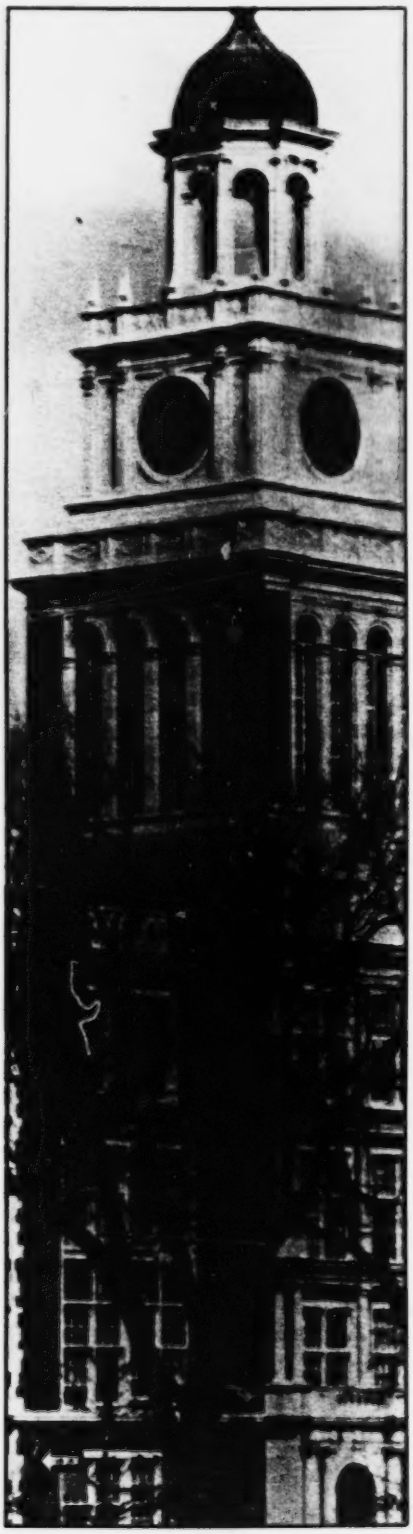
Executive Summary



The catalyst for education reform in the 1980s was the release of *A Nation at Risk* and several other reports calling for improvements in America's public schools. By the end of 1984, at least eight states will have passed comprehensive education reform programs, six of them funded largely by increases in state sales tax rates. Other states will debate education reform packages in 1985; many are likely to pass. The victim of inattention in the late 1970s and early 1980s, education quickly became a top state policy concern deserving infusions of new tax dollars.

Accompanying the new interest in excellence has been continuing interest in equity. Most new state dollars are allocated to local districts through school finance formulas; funding also has increased for special populations. Furthermore, education excellence programs have strengthened and revamped school finance formulas in a number of states. Although the education reform measures carry the total education packages through the legislative process, it seems that states are addressing equity and excellence simultaneously.

The education reform movement has changed the substance of education policy. New dollars are targeted to specific education initiatives — merit pay or career ladders for teachers, longer school days or years, more mathematics and science courses, more writing assignments, new programs for at-risk, preschool children. State policy now reaches inside schools and classrooms, which raises new and important issues of allocations. The allocation and use of instructional time, curricular content and student access to good teachers all have fiscal implications that so far have received little attention in school finance policy.

Other issues besides education reform are broadening the school finance agenda. Access to and the use of computers differ between high-spending and low-spending districts, in part because of basic school finance inequities. The growing use of sales taxes to finance education excellence is increasing the regressivity of state and local taxes. The emergence of local education foundations, the expansion of fee-for-service activities and the proliferation of business-school partnerships are changing both the finance and governance of schools. Pension costs pose a long-term fiscal problem in most states, and system incentives that reward outstanding teachers, students or schools raise new issues not handled well by traditional school finance formulas.

The strength of a state-level education reform movement depends considerably on state fiscal health, which is good in mid-1984. More budgets are balanced, and fund balances are rising. The public's concern about the quality of education and its willingness to pay for quality even makes tax increases politically feasible in many states. But state fiscal health is threatened by continuing large federal deficits, and even states that increase taxes produce too little new revenue to finance improvements fully. A continued strong economy and development of less expensive ways to meet the goals of education excellence seem essential to the continuing success of education reform.

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States Respond to Education Reform

Quickly and unpredictably, education became big news in 1984 and moved back to the top of most state policy agendas. Fiscal attention is being lavished on education in a manner unrivaled since the school finance reforms of the early 1970s.

In the late 1970s, legislative leaders began switching their attention from education to other issues, and new legislators avoided assignment to education committees (Rosenthal and Fuhrman, 1981). Experts predicted that public education would do well to maintain its revenue base in real terms over the 1980s (Garms and Kirst, 1980), and in the first three years of the decade, real revenues fell significantly (Odden, McGuire and Belsches-Simmons, 1983). In early 1983, few experts suggested a turnaround was just around the corner.

But with the April 1983 release of *A Nation at Risk* by the National Commission on Excellence in Education and *Action for Excellence* by the Education Commission of the States' Task Force on Education for Economic Growth, and with the subsequent release of other studies, education became a top priority. The President of the United States crisscrossed the country during the summer of 1983 speaking on education. Governors proposed major education reform programs in state-of-the-state messages. The business community — nationally and in many states — launched studies of public education, an area business had not addressed substantively for many years.

State response was rapid and substantial. In the last nine months of 1983, more than 250 new education task forces were charged with the responsibility to develop education reform programs. Even before the task forces were formed, many states had undertaken school improvement activities (Odden and Dougherty, 1982) drawing largely on the literature on effective teaching and schools (Cohen, 1983). By the end of the 1983, Arkansas, Florida and California had passed major education reform bills. Illinois, Florida and California had enacted master teacher bills. Reform programs were proposed in many other legislatures in 1984, and a survey of state legislators by the National Conference of State Legislatures showed that education would be the top budget issue in nearly two-thirds of the states responding.

Common to all this activity is strong interest in improving American public education — in restoring it to a position of excellence both nationally and internationally. Put differently, the issue in 1984 is education excellence, not the equity and access issues that have been on agendas for the past 15 years. The fiscal issue is not school finance reform, but raising money to finance education excellence — even though the concern for excellence arose at a time when the country was in its deepest recession since the 1930s.

The interest in education reform raises new issues for school finance. What are the short-, medium- and long-run costs of various reforms? How should these costs be calculated, and are necessary data and techniques available? Who should fund education excellence initiatives — the state, the school district, or both? How should new funds be allocated — through the school finance fiscal equalization formula, a separate equalization formula, flat grants? How should state dollars be divided between the school finance formula and traditional categorical programs — the old equity issues — and the education reform initiatives — the new excellence issues?

This new booklet begins to unravel the answers to some of these tough, new questions. It is based on a study of how eight states have dealt with education reform. All eight have either enacted comprehensive education reform or are in the process of doing so.

The booklet has four sections. The first section discusses the changing state fiscal and political contexts within which reforms are being debated. Section 2 briefly describes reform packages and their costs in Arkansas, California, Florida, Illinois, South Carolina, Tennessee, Texas and Utah. Section 3 compares and contrasts the treatment by these eight states of specific elements of reform and analyzes cost, finance and allocation implications. The fourth section summarizes the new school finance issues flowing from the reforms described in Section 3 and also other finance issues that are part of broader social and economic changes across the country.

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1. The Changing Fiscal and Political Context

Education funding, school finance and the politics of education shape — and are shaped by — a broader economic and political context. This section provides a brief overview of the fiscal condition of education in mid-1984, the fiscal condition of the states and public opinion about the schools and education reform.

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The Fiscal Condition of Education

In the 1970s, the fiscal condition of public education improved significantly. Total revenues increased, expenditures per pupil rose in real terms and teacher-pupil ratios slowly but steadily increased. Spending for public education consumed a relatively constant percentage of personal income and gross national product (GNP).

At the beginning of the 1980s, funding for education began to decline. But as Table 1 shows, revenues now are starting to rise again, or at least to stabilize. Total school revenues, which had represented a constant 3.8% of the gross national product (GNP) between 1969 and 1979, dropped to 3.7% in 1980 and to 3.5% in 1981. In 1982, the GNP itself stagnated. Since then, school revenues have generally risen as a percentage of GNP, reaching 3.6% in 1982, 3.7% in 1983 and 3.6% in 1984. Total school revenues had equaled between 4.6 and 4.7% of personal income in the 1970s. This ratio dropped to a low of 4.3% in 1982 but now seems to be rising slightly, reaching 4.4% in both 1983 and 1984.

These rebounding trends are also reflected in Table 2, which presents total nominal and real revenues for education, and revenues by source, from 1969 to 1984. The data are quite striking. Total revenues, which had increased in real terms from $69.1 to $87.4 billion in the 1970s, dropped in real terms in the first three years of this decade. But in 1983, substantially increased state and local support brought total revenues to $88.1 billion in real terms, the highest figure in history. The upward trend continues in 1984; the estimates shown in Table 2 may even be too low, because more education reform programs may be enacted before year's end. Although the $7.3 billion hike in local revenues (mainly property taxes) between 1982 and 1983 contributed substantially to rising revenues for education, overall increases are largely fueled by rising state support.

Table 3 shows the distribution of revenues for public schools by level of government. Note that the role of the state in providing school revenues generally continues to expand, although some fluctuation occurred during the last three years. Note, too, that the decrease in federal support (which has stayed the same in total dollars during the past two years, after dropping from 1982) has in part been offset by stronger local support (which jumped by 1.6% between 1982 and 1983, the first significant increase in more than a decade). If most of the money for education reform continues to come from state sources, state participation could soon exceed 50%. If a continuing rise in state support were combined with stable or rising federal support, it is also likely that local support will cease to rise. But this point is debatable.

Table 1. Elementary/Secondary Public School Revenues for Selected Years ★

School Year Ending	Total Revenues (Billions)*	Total Revenues as a Percent of GNP**	Total Revenues as a Percent of Personal Income**
1969	$ 35.5	3.8	4.7
1979	87.4	3.8	4.6
1980	95.1	3.7	4.6
1981	102.8	3.5	4.3
1982	110.1	3.6	4.3
1983	120.4	3.7	4.4
1984	127.6	3.6	4.4

*National Education Association, *Estimates of School Statistics*, selected years.
**As of second quarter, seasonally adjusted, *Survey of Current Business*, selected years.

	1979	1980	1981	1982	1983	1984
GNP	$2,329.80	$2,524.60	$2,901.80	$3,041.20	$3,272.00	$3,501.00***
Personal income	1,892.50	2,079.50	2,380.60	2,553.50	2,713.60	2,930.10***

***Estimated.

The declining contribution of property taxes to education in the 1970s and the rising contribution of state revenues, when combined with the fiscal limitations on state governments in the 1980s, lead some to suggest that the contribution of property taxes is likely to rise again in the 1980s (Augenblick, 1984). This prediction is consistent with the strong role property taxes historically have played in financing schools, and the inability of any state to eliminate the use of property taxes for schools as part of school finance reforms enacted last decade.

But Dick Netzer, one of the country's leading property tax experts, suggests that increased use of property taxes will be constrained by several factors (June 1983). First, high interest rates, which most experts consider a long-term reality, increase the cost of borrowing and decrease the price of property. Second, the shift from a goods-producing economy to one that produces services and information places less value on real goods. Both factors combine to limit increases in property value — the property tax base. In addition, claims Netzer, public dissatisfaction with local property taxes is still high, which makes raising property tax rates difficult. From a base that increases slowly and with little movement in rates, property taxes are unlikely to grow rapidly. Netzer's conclusions also are consistent with how increases in education funding have occurred in the last year — through major increases in state taxes, not in property taxes.

The data on per pupil expenditures shown in Table 4 also indicate that real revenue for education has stopped declining. Real expenditures per pupil dropped in 1980, but they have increased, slowly, in subsequent years. (Since the total number of pupils has decreased each year, the rise in expenditures per pupil is in part a statistical phenomenon, however.) Predicting expenditures per pupil for the rest of the decade is difficult, since enrollments are expected to begin rising in 1985. For these expenditures to continue rising in real terms, the percentage increase in total revenues would have to exceed the sum of the percentage increase in pupils and the percentage rise in the consumer price index.

All in all, the current and near-term revenue situation for schools looks optimistic. But the picture may not be so rosy by the end of the decade, since there is uncertainty about state fiscal health.

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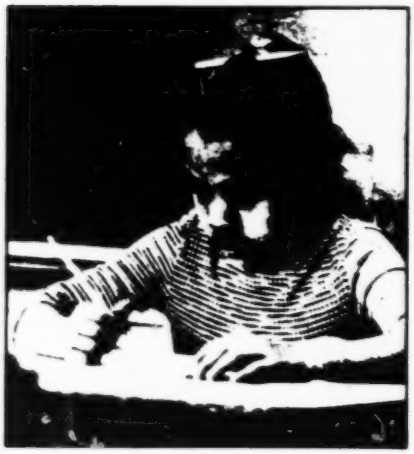

Table 2. Nominal and Real Revenues for Public Schools, Selected Years ★

School Year Ending	Sources of Revenue (Billions)							
	Local		State		Federal		Total	
	Nominal	Real*	Nominal	Real*	Nominal	Real*	Nominal	Real*
1969	$18.3	$36.4	$13.9	$27.6	$2.6	$5.2	$34.8	$69.1
1979	38.1	38.1	41.1	41.1	8.2	8.2	87.4	87.4
1980	39.9	35.3	46.5	41.1	8.7	7.7	95.1	84.0
1981	42.9	34.2	50.2	40.0	8.7	6.9	102.8	82.0
1982	47.3	35.4	53.8	40.3	8.9	6.7	110.1	82.5
1983	54.0	39.5	58.3	42.6	8.2	6.0	120.4	88.1
1984	56.8	39.7	62.6	43.8	8.2	5.7	127.6	89.3

*Relative to 1979.

Consumer Price Index: July 1969 = 110.2, July 1979 = 218.9, July 1980 = 247.8, July 1981 = 274.4, July 1982 = 292.2, July 1983 = 299.3, July 1984 = 312.8 (est.).

Source of revenue figures: National Education Association, *Estimates of School Statistics*, selected years.

The Fiscal Condition of the States

One reason the fiscal condition of education seems healthy, at least for the short term, is that the fiscal condition of the states has improved significantly. As Table 5 shows, fewer states are likely to end fiscal year 1984 with a fund balance less than 5% (the conventional standard) than did so in 1983. Moreover, most states that will have a fund balance below that standard will have a larger percentage balance than they had in 1983. Whereas eight states ended 1983 with a deficit, only three projected deficits in 1984; in all three instances, a tax increase could prevent the deficit.

Three major factors explain the improvement in state fiscal conditions. First, states were diligent in cutting appropriations to bring spending closer to revenues. Second, states enacted tax increases in 1982 and 1983 to bolster revenues; in fact, in 1983 states raised taxes by $8.25 billion, the largest amount in history. Third, the improving national economy helped expand revenues produced by natural growth.

However, as Gold and Eckl (1984) show, fiscal conditions vary tremendously by state and over time. Conditions have not improved in a number of states, and the ability of states to raise taxes is limited. In Michigan, for example, many legislators who had voted for a tax increase were removed from office by public initiative. Ohio had a tough challenge voting down a ballot measure to rescind its tax increases. An initative to roll back tax increases in Florida was thrown off the ballot, but only on technicalities.

Also clouding the outlook are large federal deficits, which many experts feel threaten the growth of the national economy and therefore of state economies as well. Many economists think economic growth will continue only if federal deficits are reduced significantly each year for the rest of the decade.

As a result, predicting the fiscal outlook for education is difficult. Gold and Benker (1983) have shown that states cut education budgets less than other budgets when they had to reduce expenditures and increased appropriations to education more than to other areas when fiscal conditions improved. But only if states remain fiscally healthy in general will education finances improve significantly.

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Table 3. Distribution of Revenues by Source ★

School Year Ending	State	Local	Federal
1969	39.9%	52.7%	7.4%
1979	47.1	43.6	9.3
1980	48.9	42.0	9.2
1981	48.8	42.7	8.5
1982	49.1	43.2	7.7
1983	48.4	44.8	6.8
1984	49.1	44.5	6.4

Source: National Education Association, *Estimates of School Statistics*, selected years.

Table 4. Current Expenditures Per Pupil in Average Daily Membership ★

School Year Ending	Nominal	Real*
1969	$ 657	$1,305
1979	1,844	1,844
1980	2,058	1,818
1981	2,289	1,826
1982	2,498	1,871
1983	2,786	2,038
1984	3,000	2,099

*July 1979 dollars.

Source: National Education Association, *Estimates of School Statistics*, selected years.

Table 5. State Year-End Balances as a Percentage of General Fund Expenditures ★

State	1978	1979	1980	1981	1982	1983	1984*
Alabama	6.7	1.4	1.2	4.1	3.8	0.5	7.0
Alaska	58.4	60.8	188.2	23.6	3.9	2.1	10.6
Arizona	3.1	11.0	19.7	8.9	2.8	0.0	0.1
Arkansas	0.0	0.0	0.1	1.9	0.0	0.7	0.0
California	31.0	16.5	13.7	1.7	1.1	–2.7	1.7
Colorado	10.3	15.1	21.5	4.1	2.3	0.0	3.4
Connecticut	4.9	N.A.	N.A.	–2.4	–1.7	–1.4	0.6
Delaware	5.1	8.9	6.8	8.2	5.9	7.1	9.0
Florida	4.2	7.9	17.6	0.6	5.4	2.0	2.6
Georgia	6.0	3.9	5.8	1.8	2.5	0.6	0.0
Hawaii	0.3	7.5	18.3	17.0	11.6	9.5	4.2
Idaho	0.0	3.2	1.9	0.4	0.0	0.0	4.4
Illinois	1.3	5.8	5.2	2.4	2.3	1.3	1.2
Indiana	1.4	18.7	10.7	1.3	2.6	2.8	4.7
Iowa	7.4	5.8	1.8	1.8	0.8	0.4	–4.5
Kansas	18.4	20.3	16.5	12.1	10.2	3.6	1.4
Kentucky	5.8	4.6	0.8	0.6	1.0	1.5	0.2
Louisiana	1.6	15.1	19.3	14.8	8.8	4.6	0.0
Maine	8.4	5.5	3.6	4.3	2.8	3.2	3.0
Maryland	9.2	5.5	11.2	5.3	4.9	1.0	0.0
Massachusetts	5.5	5.6	1.1	0.5	1.6	1.3	0.4
Michigan	0.6	0.7	0.0	0.0	N.A.	0.5	4.2
Minnesota	1.0	7.8	3.4	–0.1	–14.5	1.1	4.1
Mississippi	13.7	8.1	6.2	7.0	2.9	1.2	0.0
Missouri	9.4	20.5	13.7	4.9	4.3	2.4	3.5
Montana	15.4	12.0	17.8	23.4	17.6	17.6	7.5
Nebraska	6.2	11.9	20.3	8.8	0.0	–0.5	5.8
Nevada	N.A.	26.6	18.6	11.4	10.4	20.3	12.0
New Hampshire	11.3	13.2	3.9	–11.0	–2.4	–12.5	–9.2
New Jersey	7.0	4.9	5.9	3.8	2.0	2.2	3.4
New Mexico	13.0	6.4	16.6	18.6	7.5	12.0	10.8
New York	0.1	0.1	0.1	0.1	0.0	–0.3	0.3
North Carolina	8.5	7.6	10.4	4.9	3.3	2.0	0.4
North Dakota	73.3	49.8	53.2	49.9	25.1	5.1	3.7
Ohio	3.2	9.2	3.4	0.2	deficit	0.9	0.8
Oklahoma	10.8	13.4	5.6	27.1	7.4	1.7	N.A.
Oregon	20.7	12.9	6.7	0.8	deficit	0.8	1.1
Pennsylvania	–0.1	0.5	1.1	1.1	0.0	–3.1	0.0
Rhode Island	3.7	6.9	5.2	4.1	0.0	0.4	0.7
South Carolina	4.3	1.0	3.2	0.0	0.0	0.5	1.1
South Dakota	5.2	5.6	7.3	8.9	3.7	6.7	9.9
Tennessee	0.0	0.3	4.9	1.9	1.3	0.4	2.7
Texas	20.2	17.9	10.7	20.0	N.A.	11.4	0.2
Utah	4.1	2.5	1.2	5.9	1.7	1.2	1.0
Vermont	2.5	0.0	–3.1	–0.5	0.0	–9.5	–13.2
Virginia	1.9	5.7	14.1	11.0	1.7	3.3	1.5
Washington	10.6	14.8	4.6	0.1	deficit	1.1	0.7
West Virginia	5.9	4.9	7.9	0.8	–0.6	0.0	2.1
Wisconsin	9.0	9.0	2.2	0.7	1.9	–4.4	9.1
Wyoming	30.0	69.9	70.0	30.3	26.4	51.4	10.4

*Estimated January/February 1984.

N.A. = not available.

Source: Steven D. Gold and Corina L. Eckl, unpublished data from the National Conference of State Legislatures (Denver, Colorado, February 1984).

Public Opinion

Robert Teeter, a national pollster for Republican candidates, and Peter Hart, a pollster for Democratic candidates, have suggested that public concern for education rose in the 1980s even before the release of major national reports on education in early 1983. In an analysis of polling data presented at the 1983 annual meeting of the Education Commission of the States, they both pointed out that the public felt the quality of education had worsened and improvements were needed in education and student performance. To some degree, they implied, the national reports merely articulated and made urgent what was already a public concern.

According to the Gallup polls, the public has generally given the nation's schools lower and lower grades over the past decade. Although the percentage of respondents giving schools an A or B has stayed about the same during the past few years (see Table 6), Gallup data indicate that the public feels improving the schools has high priority.

Polling data in many states suggest that the public strongly supports education reform. In a 1983 Tennessee survey of voters' attitudes toward public education, 67% of those polled said the state should spend more money to improve public education, even if it meant increasing taxes. In Utah, a 1983 survey conducted for the Governor's Steering Committee on Education Reform found that 71% of respondents would favor a tax increase to provide more money for public schools. A survey in South Carolina showed 83% of respondents agreeing that the state must spend more money on public schools; 62% agreed that the best way to raise more money was through a one-cent sales tax increase; and 75% said they would vote for legislators who voted for higher taxes to improve the schools. In North Carolina, 77% of those polled said they would pay more for public education.

The polling data — in the main — suggest the public is firmly behind state government attempts to restore excellence to all public schools, even if it means tax hikes.

But while the public supports increased funding that is linked to education reform, it also will expect the reforms to produce results, i.e., to raise student achievement and improve the schools. Evidence on the efficacy of school reforms likely will be needed to sustain public support for school reform. Since it takes time for new programs to impact student achievement, state policy makers in the short term will need to document progress. By the end of the decade, student achievement will need to improve to solidify support for reform.

In summary, the fiscal and political context of education in 1984 is markedly different than in the early 1980s. The fiscal condition of education has improved noticeably since the beginning of the decade, as economic conditions have improved in most states and the nation, and as national reports have bolstered interest in education. Clouding the outlook for continuing fiscal improvement is the possibility that a large federal deficit may slow economic recovery. But public interest in improving education is strong in many states, and many voters seem willing to pay for improvements by raising taxes. ★

Table 6. Public Ratings of Public Schools ★

Grade Given to Public Schools	Percent of Those Polled						
	1974	1977	1979	1980	1981	1982	1983
A	18%	11%	8%	10%	9%	8%	6%
B	30	26	26	25	27	29	25
C	21	28	30	29	34	33	32
D	6	11	11	12	13	14	13
F	5	5	7	6	7	5	7

Source: George Gallup, "Gallup Poll of the Public's Attitudes Toward the Public Schools," *Phi Delta Kappan*, vol. 65, no. 1 (September 1983), pp. 33–47.

2. Education Reform in Eight States

Nearly all states are involved in education reform, but some states have capitalized on improvements in state fiscal conditions with particular speed. Arkansas, California and Florida enacted major reforms in 1983; South Carolina, Tennessee and Utah enacted reforms in early 1984. Texas called a special session of the legislature in mid-1984 to address education reform, and Illinois, which will wait until 1985 to address education comprehensively, established a small master teacher program in 1983. This section discusses the major elements of the new education programs in these eight states.

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Arkansas

In a special session in late 1983, the Arkansas legislature passed a major education reform package funded mainly by a one-cent increase in the sales tax. To raise the quality of public education, educational standards have been strengthened and the school finance formula has been redesigned.

Arkansas historically has ranked very low in expenditures per pupil. Expenditures per pupil in 1983–84 were estimated at $2,151, which put Arkansas in 46th place nationally. Revenues for its 420,000 pupils totaled $527 million from the state, $321 million from local districts and $121 million from the federal government. The average teacher's salary of $16,929 ranked 48th nationally.

One impetus for education reform was a 1982 ruling by the Arkansas Supreme Court that the school finance structure violated the state constitution. In response to the ruling, former Governor White appointed a task force to design school finance alternatives for submission to the 1983 legislature.

White was defeated in the 1982 elections by Bill Clinton, a strong advocate of improving education to spur economic growth. At the urging of Governor Clinton, the legislature in 1983 passed the Quality Education Act, which called for creating a State Standards Commission to set new standards for Arkansas public schools. Clinton appointed his wife as chairman of the commission. Together they developed a strategy to link higher standards for education with school finance reform, and they also launched a large public outreach program to encourage support for increasing taxes to fund a major education reform.

In late 1983, the legislature passed a significant education reform package. In early 1984, the Standards Committee made final recommendations for new standards. Combined, the programs include the following major elements.

★ Requirements for high school graduation raised from 16 to 20 courses

★ Maximum class size reduced to 23 in elementary grades

★ School year lengthened from 175 to 180 days

★ Minimum school day lengthened from 5 hours to 5.5 hours

★ Contract for teachers lengthened from 180 to 190 days

★ Curriculum strengthened in many areas, including mathematics and science

★ Minimum competency testing of students in grades 3, 6 and 8. (Eighth-grade students must pass this test to be promoted into high school.)

★ Testing of teachers. (Teachers who do not pass may be fired.)

★ Six-year school improvement plans required from all school districts. (Progress reports are to be provided annually at local public hearings, and the state is to intervene if progress is insufficient.)

★ Grants and scholarships to students, teachers and schools for outstanding performance

★ School improvement programs to be implemented by the state education agency including:
- — Classroom management
- — Academy for administrators and school board members
- — Effective schools programs
- — Training principals and teachers in reading instruction
- — Training parents to be teachers at home
- — Five new regional service units

★ Major school finance reform. Dollars in the old minimum-foundation program, vocational and adult education, special education, elementary and secondary textbook funds, guidance funds and kindergarten funds are combined into a new pupil-weighted foundation program.

The program is funded by a simple one-cent increase in the sales tax (from three cents to four cents) that is now assumed sufficient to fund the programs and standards listed above. Districts are to implement the new standards in ways they consider appropriate, including the use of computers and cooperative programs across district lines. After the 1987 school year, progress and the adequacy of funding will be assessed.

Most of the new funds will be allocated to school districts through the new foundation formula, with the requirement that districts spend no less than 70% of new state dollars on raising teacher salaries or one-half of the money needed to raise salaries to the average of the surrounding states, whichever is less. In 1983–84, state aid through the new formula will increase by $68 million, from $378 million to $446 million, and to $526.5 million in 1985. Total state aid will increase from $479.7 million in 1982–83 to $674.6 million in 1984–85, a 41% increase of $194.5 million over two years. Since 116 of the 367 districts also must raise their property tax rates, local revenues will increase in nearly one-third of all districts. ★

California

In 1982, California elected a new governor and a chief state school officer who was interested in education reform. The 1983 legislative session produced a large-scale education reform package (SB 813) based on proposals put forth by a leading state senator, Assembly Democrats and the new chief state school officer. The 1984 legislature is adding numerous new elements to that program. This recent activity follows the passage of major school finance reforms in 1973, 1977 and 1978 (after Proposition 13), each of which included significant education reform elements.

Although California has long been a leader in school finance and education reform, it ranked 31st nationally in 1983–84 in current operating expenditures per pupil (estimated at $2,912). It has about four million students in average daily attendance. Revenues totaled $8.6 billion from the state, $3.4 billion from local districts (Proposition 13 limited the use of local property taxes for schools) and $885 million from the federal government. Average teacher salaries estimated at $26,403 put California in fifth place nationally.

SB 813, which ran to more than 200 pages, is difficult to summarize. The most well known programs are the following:

Strengthened Curriculum and Education Program

- ★ Reinstated statewide high school graduation requirements and established "Golden State" tests to honor the best students at graduation (FY84 cost: nothing)
- ★ Provided fiscal incentives to lengthen the school day or reinstate the six-period high school day
- ★ Provided fiscal incentives (including total teacher pay) to local education agencies to lengthen the school year (FY85 cost for longer year and longer day: $256 million)
- ★ Developed model curricula in critical content areas
- ★ Expanded the school improvement program to make $100 per pupil available for all students in elementary grades (FY85 extra cost: $10 million)
- ★ Provided a flat grant of $20 per pupil for counseling for all 10th-grade students to help each student outline a sound high school program (FY84 cost: $6 million)
- ★ Mandated 150 hours of continuing education for all teachers every five years
- ★ Increased textbook funds for grades K–8 and provided first-time textbook funding for grades 9–12 (FY84 cost: $36 million)

Incentives for Recruiting and Retaining Good Teachers

★ Increased beginning teacher salaries to $18,000, adjusted for inflation over three years (FY84 cost: $12 million)

★ Established a mentor teacher program that provides stipends of $4,000 for 5% of the teachers in a local education agency (FY84 cost [one-half year only]: $11 million; FY85 cost: $31 million)

★ Reinstated summer school (eliminated in 1978) in mathematics and science, which lets mathematics and science teachers earn more money (FY85 cost: $40 million)

★ Expanded regional teacher centers for staff development, including computer training (FY85 cost: $5 million)

★ Created a mini-grant loan program for teachers (FY85 cost: $18 million)

Changes in School Finance Formula

★ Simplified overall formula

★ Reduced the "squeeze" on high-spending districts, letting them increase expenditures at a faster rate

★ Brought low-spending districts to within $50 of the prior-year average for 1983–84 and to the actual prior-year average for 1984–85

★ Calculated revenue limits separately for elementary, high school and unified districts and made the increase a flat dollar amount (which provides a higher percentage for low-spending districts)

State aid increased by $800 million between 1982–83 and 1983–84, and it is projected to increase by $1.0–$1.3 billion for 1984–85. Large as $800 million is in absolute value, the increase turned out to be 8% for the school finance formula, 6% for the traditional categorical aids (with special education receiving an 8% hike), and (since enrollments rose by 40,000 students) 6.7% on a per-student basis. Funds for raising teacher salaries, lengthening school days and years, and other excellence initiatives are now being allocated each fiscal year. But state support for beginning teacher salaries will be eliminated after three years, and support for other programs will eventually be rolled into the school finance revenue-limit program.

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Florida

Florida, like California, has been a leader in school finance and education reform. In 1983, it was the first state to enact legislation to improve public education.

In 1983–84, Florida ranked 25th in the nation in current operating expenditures per pupil (estimated at $2,942). The state has 1,495,880 pupils in average daily membership. Revenues totaled $2.71 billion from the state, $1.86 billion from local districts and $400 million from the federal government. The average teacher salary was estimated at $19,545, 35th nationally.

Approved during a special session of the legislature in July 1983 was a plan that includes:

★ High school graduation requirements of 24 units, the highest in the country (FY84 cost: no separate cost, see "seventh period in high school" below)

★ Mathematics and science initiatives:
  — science and computer equipment and labs (FY84 cost: $30 million)
  — Seventh period in high school, for more mathematics and science courses (FY84 cost: $27 million)
  — Summer inservice training institute (FY84 cost: $9.2 million)

★ Master teacher and career ladder program (FY84 cost: $17 million)

★ Writing program for grades 10, 11, 12 (FY84 cost: $20 million)

★ Increase of $252 million (12.7%) in combined state and local revenues for the basic school finance formula.

In total, state and local revenues grew by over $400 million, or $267 per child (an increase just over 9%), most of it allocated through the state's school finance program. The sources of new state funds are a new unitary tax on foreign income of corporations based in Florida and the sales tax increase from 4% to 5% enacted in 1982.

The reform momentum continues this year, and several new programs have been proposed for 1985:

★ A House-sponsored middle school bill that would mandate statewide curriculum requirements for grades 4–8 (FY85 appropriation: $2 million)

★ A Senate-sponsored "merit school" bill that would make extra funds available to schools judged meritorious on criteria including student achievement (FY85 estimated cost: $20 million for either local merit school or local merit pay plans)

★ A Senate-sponsored bill extending the 7th period day (FY85 cost: $67 million)

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Illinois

In 1983, Illinois enacted a "master teacher" program that awards 500 teachers a one-time bonus of $1,000 for curriculum development, inservice training and other functions of a master teacher. Since the average teacher salary in Illinois for 1983–84 is estimated at $23,345 (12th in the nation), the bonus equals just under 5%. Because the award is small and the number of recipients is limited to about one teacher for each 2 of more than 1,000 districts, the program is a modest step toward restructuring compensation for teachers.

Education reform in Illinois is slated for debate in the 1985 legislative session. Three major task forces will make proposals — a school finance committee established by the state board, a legislative education reform committee and a business-education task force. Four related issues will likely constitute the 1985 agenda: (1) school reform including higher school graduation requirements, teacher effectiveness and teacher salaries (including significant expansion of the master teacher program), effective schools and curricula; (2) school efficiency, perhaps based on the recommendations of the business/education task force and including school district consolidation; (3) fiscal equity/school finance reform based on a proposal to adopt the school finance formula to a resource cost model that identifies an education program for each district, totals the cost and then allocates state funds through a fiscal equalization formula; and (4) tax reform, including a permanent increase in the state income tax and a reduction of local property taxes.

The temporary state income tax increase enacted in 1983 to balance the budget will expire in June 1984, and no extensions will be proposed this year. Next year, however, there may be interest in making the increase permanent and using the proceeds to fund education and school finance reform and to reduce property taxes.

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South Carolina

South Carolina has been quietly active in education and finance reform for nearly a decade. It enacted a major school finance reform in 1977, initiated student testing programs the next year and, in 1984, passed a comprehensive education reform package funded primarily by a one-cent increase in the state sales tax.

Despite the influx of new dollars after 1977, public education expenditures have stayed low. Current expenditures for each of the state's 584,000 students in average daily membership are estimated at $2,305 for 1983–84, 44th in the nation. Revenues totaled $967 million from the state, $467 million from local districts and $196 million from the federal government. The average teacher salary is estimated at $17,500, 43rd in the nation.

In early 1983, the governor appointed the Task Force on Financing Excellence in Education. About the same time, the chief state school officer outlined a comprehensive education package to improve education. The governor then appointed the Partnership of Business, the Legislature and the Public Schools, which he chaired with the chief state school officer. The task force developed an education reform package, which the partnership reviewed. Both groups supported the final proposal, which the governor submitted to the legislature in November 1983.

The plan passed by the House, which closely resembles the proposal, includes 10 major components:

★ High school graduation requirements increased from 18 to 20 courses (FY85 cost: $5 million)

★ Mandatory kindergarten for all 5-year-olds and a preschool program for disadvantaged 4-year-olds (FY85 cost: $4.2 million)

★ Exit exam for high school graduation, grade promotion based on achievement and a state remedial program for grades 1–12 (FY85 cost: $59.0 million)

★ Programs for gifted and talented students (FY85 cost: $3.7 million)

★ Across-the-board salary increases for teachers, raising them to the Southeastern average, nearly 16% (FY85 cost: $59.5 million)

★ Incentive pay for teachers and administrators (two-year pilot; to be implemented in 1987 at a cost of $24 million)

★ Incentive grants for high performing schools (five-year phase-in, at a cost of $28 million in 1989)

★ Competitive grants for teachers, forgivable loans for prospective teachers and higher standards for admission to teacher training

★ Numerous school improvement programs administered by the state board

★ Changing the focus of the School Advisory Councils to school improvement and renaming them School Improvement Councils

★ Strengthened school finance formula (FY85 cost: $43 million)

★ Other program improvements (FY85 cost: $17 million)

Nearly $273 million, an increase in state aid of more than 27%, funds these reforms. The money will come from increasing the sales tax from 4% to 5% and natural growth in general fund revenues. Most of the new funds will be allocated through the pupil-weighted foundation program.

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Tennessee

In early 1983, before the appearance of national reports on education, the Tennessee Legislature considered "The Better Schools Program," which included a proposal for a career ladder that would fundamentally restructure the way teachers are compensated and dramatically increase the salaries of competent teachers. The plan was not enacted, but it helped spark a national debate on teacher compensation. After a series of interim legislative studies and slight modifications, The Better Schools Program became law in an unprecedented special legislative session in early 1984.

Tennessee, like many Southeastern states, has generally been below average in expenditures for public education. Reforms enacted in the mid-1970s simplified school finance but added little new money. In 1983–84, current expenditures per pupil were estimated at $2,059 (48th in the nation) for the state's 818,205 public school students. Revenues totaled $797 million from the state, $766 million from local districts and $174 million from the federal government for a total of $1.74 billion. The average teacher salary was estimated at $17,900, 44th in the country.

The Better Schools Program has six major components:

★ A five-step career ladder program for teachers (FY85 cost: $50 million)

★ Across-the-board salary increases of 10% (FY85 cost: $69 million)

★ Programs to improve students' basic skills and computer skills (FY85 cost: $13 million)

★ Expanded kindergarten (FY85 cost: $1.25 million)

★ Teacher aides in grades 1, 2 and 3; one aide for each 25 students by 1987 (FY85 cost: $6.5 million; FY87 cost: $21 million)

★ Other categorical programs (FY85 cost: nearly $30 million)

The legislature appropriated an additional $173 million for public education for 1985, an increase of 22%. About one-half will be allocated through the school finance formula and one-half in flat grants. Over the next three years, the state plans to spend an extra $1 billion on public education, more than double its aid in 1983–84. The commitment to better pay for teachers is clear from the 1985 figures: $119 million of the extra $173 million for 1985 will be allocated for extra teacher compensation.

The entire program, which also includes extra funds for higher education, is funded by new business taxes and an increase in the sales tax from 4.5% to 5.5%.

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Texas

One of the campaign promises Mark White made before he was elected governor in 1982 was to increase teacher pay substantially. When the legislature did not pass a bill on teacher pay the governor introduced in 1983, he established a prestigious Committee on Public Education chaired by a prominent business leader. The committee issued recommendations in April 1984, and a special session of the legislature was called for June of 1984. Significant new measures have been proposed:

★ Lengthening the school year, from 175 to 180 days (FY85 cost: $47.5 million)

★ Increasing teacher salaries by 10%, creating a career ladder and lengthening teachers' contract year from 183 to 188 days (FY 85 cost: $350 million)

★ Reducing class size in grades 1–2 to 20 pupils (FY85 cost: $121 million)

★ Establishing a prekindergarten program for disadvantaged 4-year-olds (FY85 cost: $53 million)

★ Testing all students each year for promotion from grade to grade (FY85 cost: $7 million)

★ Strengthening the state education agency (FY85 cost: $6.7 million)

★ Improving and streamlining the school finance equalization formula (FY85 cost: $400 million)

Utah

Enrollments have been increasing at 5% a year in Utah (about 18,000 students), so the state has been struggling to finance expanded educational services. For this reason, and because interest in education excellence is high, the legislature asked the governor to appoint the Utah Education Reform Steering Committee in mid-1983. The Steering Committee, which included representatives of business and industry, issued a major report late in 1983.

Utah's current operating expenditures per pupil in 1983–84 are estimated at $1,892, 49th in the country. Students total 375,000 in average daily membership. Average teacher salaries are $20,256, about 28th in the country. (Salaries will probably stay below average, since many new teachers will be entering the system.) Revenues for 1983–84 are estimated at $897 million, with the state providing $491 million, local districts $360 million and the federal government $46 million.

The Steering Committee requested funds to maintain current programs and to improve education. Below are major proposals, the funding requested and the final legislative appropriations for the 1985 school year.

Education Program	Funding Requested	Funding Appropriated
Career Ladder for Teachers	$41.4 million	$18.0 million
School Productivity	8.0 million	1.0 million
School Finance Formula	55.7 million	35.8 million

The committee also requested new funds to launch a major technology initiative. The legislature did not fund that program, but it did enact a 25% tax credit for corporations that donate computers to schools.

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Implementing the recommendations would require adding an additional $987 million to the $4.2 billion 1983–84 state allocation, an increase of nearly 25%. The new school finance formula would also increase local contributions, estimated at $4.0 billion in 1983–84. Current operating expenses estimated at $2,510 per pupil in 1983–84 for the three million students would increase substantially, as would teacher salaries estimated at $20,100 for 1983–84.

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3. The Political Economy of Education Reform

To discover how the eight states determined the costs of the education reforms, how money for reforms will be allocated to school districts and teachers, who undertook fiscal analyses and what new finance issues need research attention, ECS conducted telephone interviews in the spring of 1984. Approximately 30 people in governor's offices, legislative research offices and state education agencies were asked the 12 questions listed in the Appendix.

Each person interviewed was asked to list the major elements of education reform in his or her state. Cited frequently were nine elements:

- ★ New programs for teacher compensation
- ★ Longer school days and school years for teachers and students
- ★ Smaller classes and additions of support staff (guidance counselors, reading aides, reading specialists)
- ★ Stiffer requirements for high school graduation
- ★ More student testing
- ★ Prekindergarten programs for disadvantaged children
- ★ School improvement initiatives
- ★ Merit school plans
- ★ School finance reforms

Underlying these elements of reform were four major concerns. The first was to recruit and retain better teachers and administrators. The second was to strengthen the curriculum and improve schooling processes. This concern, rightly or wrongly, was derived in part from comparisons of student performance in this country with performance in other countries with whom the United States competes economically, and in part from declining test scores in this country. The third concern was to create incentives to reward superior performance of teachers, schools and students.

The fourth and somewhat surprising concern was for fiscal equity, expressed through continuing efforts to strengthen fiscal equalization formulas. Concern for fiscal equity was clearly secondary, however, and traditional school finance issues emerged only in allocation decisions made after the substantive elements of education reform had been determined.

There were surprising similarities in the methodologies states used to determine costs. One reason may be that the people who determined costs were those traditionally involved in finance issues, i.e., the school finance experts in each state. In Arkansas, school finance staff in the state education agency were centrally involved in designing a new school finance formula as part of the reform package. In California, high-level school finance staffers in the state education department had become legislative staff. (One had become chief aide to the speaker of the assembly, another chief of staff for the prime senate author of the reform bill.) In Florida, a national expert on school finance had become education aide to the governor. Two other national experts in school finance were staffers for key House and Senate leaders. South Carolina's top school finance expert had become the governor's education aide; school finance staff in the state department of education conducted most of the cost analyses. This pattern of involving key school finance experts held for Tennessee, Texas and Utah as well.

Also similar was a tendency to alter initial estimates of cost to fit available revenues during the course of legislative debate, a not unusual political phenomenon. The costs themselves were usually determined by broad policy decisions that limited the arena in which analytic techniques could be used. For example, the costs of career ladders or merit pay programs were determined much more by the number of rungs on the ladder or the level of awards — by decisions on the key policy issues — than by costing techniques used once those decisions had been made.

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Appendix

Survey Instrument on Cost and Allocation Issues Related to Education Reform Programs

1. What are the major elements of the education reform package?
2. What is the extra cost of each element?
3. Is there information on costs over time?
4. How were the costs determined? What techniques were used? Was the need for each district analyzed separately, or were general statewide guesstimates made? What data were on hand that were used? What data would you liked to have had?
5. Who did the costing out? SEA, legislature or gubernatorial staff? Budget, school finance or curriculum and instructional staff?
6. How will the dollars be distributed to local districts? If not through the general fiscal equalization formula, or through a separate fiscal equalization formula, why not?
7. From where do the new dollars come? State or local level — what is the split? Which taxes: sales, income, natural revenue growth, etc.?
8. When did the cost issue arise in the education reform debate? Early on so it was dealt with substantively throughout the debate; in the middle; or at the end so that the tough issues were not given much attention?

9. How did funding fare for the general fiscal equalization formula, and the categorical programs for special populations — state compensatory education, bilingual, and handicapped?
10. Is there a long run strategy for all pieces of the education reform program to fit together? Either a long-term substantive or long-term fiscal strategy?
11. Any general comments or observations on the politics?
    - — What were the major guid pro quos?
    - — Were the high wealth, or high expenditure per pupil districts more involved in the debates, and on what issues?
    - — Who were the key political actors and what were their major concerns?
12. Was education reform funding affected by the general fiscal picture for the state?

Teacher Compensation

Raising the salaries of teachers and administrators and changing the salary structure was an issue all eight states addressed. Four major types of proposals were made: (1) attempts to replace or augment the typical education-and-experience salary schedule with one based on job performance and responsibility (merit pay, master teacher or career ladder plans); (2) across-the-board salary increases; (3) increases linked to lengthening the school day for teachers or the contract year; and (4) raising salaries of beginning teachers.

Merit Pay, Master Teacher Plans or Career Ladders

All of the eight states except Arkansas established mechanisms of this sort. California created the Mentor Teacher program that provides an annual bonus of $4,000 for 5% of the teachers in each district. Florida's long-range plan is to have a two-rung master teacher program. A teacher on the first rung is designated an "associate master teacher" and receives a $3,000, three-year, renewable bonus; a teacher on the second rung is a "master teacher" and receives a $5,000 bonus. (Only the first rung now exists.) The Illinois program, described in the previous section, provides an annual bonus of $1,000 to 500 teachers. In South Carolina, 10 districts will test variations of career ladder, master teacher or bonus programs next year, from which the state will then select models for implementation. In costing-out the program, the state education department assumed 20% of teachers would receive a $3,000 bonus, which is a preliminary indication that the final plan will be a bonus plan. Tennessee enacted the most comprehensive career ladder plan. The ladder has five rungs: (1) probationary teacher, with a one-year term preceding either promotion to the second rung or dismissal; (2) apprentice teacher, with a one-year term and $500 salary supplement, followed by promotion or dismissal; (3) career level I, with a five-year renewable term and $1,000 salary supplement; (4) career level II, with a five-year renewable term and a $2,000 or $4,000 salary supplement for a 10- or 11-month contract; and (5) career level III, with a five-year renewable term and a $3,000, $5,000 or $7,000 salary supplement for a 10-, 11- or 12-month contract. (Tennessee and South Carolina have similar plans for administrators.) Texas had set aside approximately $225 million for a career ladder, but the ladder had not yet been designed; the governor had, however, proposed giving the most experienced teachers $6,000 bonuses each year. Utah is awarding districts flat grants totalling $15 million plus benefits to design local career ladder programs. A maximum of 50% of the funds can be used for extended contracts, with the remainder allocated on the basis of teacher performance. In all eight states, the participation of teachers is voluntary.

Varying considerably by state are percentages of eligible teachers and assumptions about how many teachers will receive awards. California and Illinois set quotas — 5% in California and 500 teachers (.5%) in Illinois. In most of the other states, general assumptions have been made about eligibility and numbers of awards. In Florida, for example, an associate master teacher must have an in-field master's degree; about 10,000–13,000 of the state's 33,000 teachers have this degree, and the state expects to make awards to 50% of them. South Carolina has assumed that 20% of teachers will receive awards. In Tennessee, where teachers need a minimum of three years of experience to be eligible for career level I, the state estimates that 80% of the 40,000 teachers meeting that criterion will be promoted. Estimates of how many teachers will move to career levels II or III are unavailable, but no quotas have been set. Eligibility in Utah will vary with the design of each local plan. In short, the percentage of teachers likely to earn pay increments or bonuses varies from less than 1% in Illinois and 5% in California to 80% in Tennessee.

Clearly, more research is needed to identify percentages of teachers who meet specific criteria and, at least for career ladders, percentages of teachers needed on various rungs for adequate staffing.

Types of awards also vary widely. California and Illinois award one-year, lump-sum bonuses. The Tennessee awards are added to the salary base, are cumulative and (at the top three levels) are awarded for three to five years. Florida's associate master teacher award is for three years and can be renewed; the proposed master teacher award will be larger and good for a longer period. Although types of awards are as yet unspecified in South Carolina, Utah and Texas, most respondents stated that award amounts would be based on assumptions about the number of teachers eligible and available revenues.

Dollar amounts of the awards also varied widely, from $1,000 in Illinois to $7,000 in Tennessee. The $4,000 increment in California approximately equals the difference between the average daily salaries of principals and teachers times the average number of days in a teacher's contract. That is, the daily pay of principals and mentor teachers will be roughly equal.

To the costs determined by multipyling the number of teachers on each rung by the award for that rung must be added the costs of program administration and teacher evaluation. These can be substantial, consuming nearly 20% of the total cost in Tennessee.

In all eight states, the revenues to finance these types of raises for teachers derive completely from state sources and are allocated outside the school finance formula as flat grants to school districts or teachers. In short, the developing current practice is for the state to pick up to the total tab for career ladder or merit pay programs and distribute dollars on an unequalized basis to local districts.

Across-the-Board Increases

Six of the eight states give teachers across-the-board raises. School districts in Arkansas must either spend at least 70% of the state aid increase on teacher salaries or half the amount needed to raise salaries to the average of surrounding states, whichever is less. Florida's policy is to raise average salaries to the top quartile in the country. The goal in South Carolina is to raise teacher salaries to the average of the Southeastern states. Texas and Tennessee reform plans include a 10% across-the-board pay hike.

The extra costs were determined by multiplying an average salary-plus-benefits figure by the number of teachers and the percentage increase. Funds for across-the-board raises will be allocated through the school finance general aid equalization formula rather than through categorical grants. Since school districts in Arkansas, Florida and Texas must increase their financial contributions to education, local money will also be available for general salary increases in those states.

No respondents gave explicit reasons for allocating across-the-board increases through the school finance formula and career ladder awards outside that formula. The explanation may be, however, that across-the-board increases are considered enhancements of plans already in place for which the school finance formula has been the distribution mechanism, whereas career ladder programs are considered categorical programs that need a new distribution mechanism.

Increases Linked to Longer Contracts

All eight states except Illinois partially link more pay to more work. Sorting out percentages of pay increases due to outstanding performance, across-the-board hikes and longer contracts is difficult, but longer contracts clearly play at least a limited role.

Arkansas has extended teachers' contracts by 10 days. California provides fiscal incentives to school districts that voluntarily lengthen the school day or school year, certify they already meet new state criteria or reinstate summer school; for each measure the district undertakes, it receives extra money it can use to increase pay. Florida provides fiscal incentives to districts that have seven periods in the high school day or will add a seventh period; the funds can be used to increase teacher load and pay or to hire more teachers. In committee deliberations in South Carolina, there seemed to be strong consensus for "merit work," i.e., extended contracts for the best teachers. Part of the pay hike in Texas includes funds to extend teachers' contracts by five days. Utah stipulates that school districts can use up to 50% of career-ladder funds for extending teacher contracts. Large pay increases at the top levels of Tennessee's career ladder come with contracts of 10, 11 or 12 months.

The extra costs were determined by multiplying the number of extra days (or months) by an average salary-plus-benefits figure. All eight states supply all the extra money to extend contracts, but distribute funds to school districts in different ways. Arkansas and Texas will distribute funds through new school finance formulas; California, Florida, South Carolina and Utah will distribute funds as categorical grants. The reason for the difference may be that extended contracts are statewide mandates in Arkansas and Texas while in California, Florida and Utah they are simply incentives for districts that volunteer to participate.

Underlying all plans is the notion of making teaching a full-time occupation for professionals. Although some programs take only modest steps toward this goal, there seems to be widespread understanding that recruiting and retaining high-quality people whose alternatives are full-time jobs requires that public schools also offer opportunities for full-time work.

Raising Salaries of Beginning Teachers

California is the only state studied that will raise the salaries of beginning teachers. The state will provide aid to increase beginning salaries by 10% per year for the next three years in districts where beginning salaries now are less than $18,000 (a figure that will be adjusted for inflation each year). To determine costs, the state identified the number of beginning teachers in each district with salaries below $18,000 and calculated how much money was needed to raise these salaries by 10% or bring them to $18,000. The cost for 1983–84 was relatively low, about $12 million, mainly because few districts in California are hiring new teachers. Because the student population of California is growing, extending the program beyond three years will be very expensive.

Summary

Concern about teacher pay is obviously widespread, and states are willing to take expensive steps to remedy the situation. Even so, most pay-for-performance plans require modest funding increases, in the range of 5–10% of current salaries (Thompson, 1984).

Policy makers lack some important information about how compensation plans can help recruit and retain better teachers, as well as improve schools. Much new research is needed, and quickly (Palaich and Flannelly, 1984).

What could help states and school districts in the short run are clear standards for changing teacher pay. One standard might be raising beginning pay to the level of beginning salaries for liberal arts college graduates in a given region or labor market. Another might be setting average teacher pay after 12 years, say, at the average salary of all college graduates in an area. Top teacher pay, after 20–24 years, could be set at the average salary of middle-level managers in the private sector.

Also needed is analysis of the relationship between economic incentives for teachers and other incentives (Rosenholtz, forthcoming). Susan Rosenholtz suggests that the major issues in recruiting and retaining good teachers are not extrinsic and economic but intrinsic and related to teachers' feelings of efficacy. Mitchell, Oritz and Mitchell (1984) suggest that teacher rewards need to be conceived in even a broader context including teacher motivations, intrinsic and extrinsic rewards, and incentives for individual teachers, groups of teachers and schools. The need for more research on teacher compensation extends beyond economics to the mix of motivations, rewards and incentives. Also essential are systems for evaluating teachers that are linked directly to school goals and the teacher outcomes desired (Darling-Hammond, Wise and Pease, 1983).

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Longer School Days and School Years

Arkansas, California, Florida and Texas have proposed lengthening the school day and school year, though none of the proposals match the 20% increase advocated in some national reports. Arkansas increased the minimum day from 5 hours to 5.5 hours and lengthened the year from 175 days to 180 days for students and from 180 days to 190 days for teachers. California provides fiscal incentives to lengthen the school year from 175 days to 180 days and to reinstate six periods (lasting a minimum number of minutes) in high schools. Texas proposes to extend the school year by 5 days for both teachers and students; the first public draft of the Texas plan extended the school day (by 2 hours, at a cost of $303 million), but that measure was eliminated from the final proposal. Seemingly most radical of these modest proposals is the Florida proposal to add a period in high schools, but it turns out that many districts already have this extra period.

Various techniques were used to determine the costs of these extensions. Arkansas determined no specific costs: all new standards and programs are to be implemented with the money provided under the new school finance formula, and the state will assess funding adequacy in 1987. California determined costs by multiplying 5/175 (the ratio of the extension to the length of the old year) by the revenue limit for each school district, then multiplying the result by 60% (the average amount of current operating expenditures represented by instructional expenditures). This produced estimates of extra costs for teachers and administrators, but not for operations, maintenance and support staff. Even so, the initial estimates were in the $100 million range, and the final bill made the program voluntary. The same general methodology was used to estimate the cost of lengthening the high school day from an average of 5.5 periods to an average of 6.0 periods. Estimated costs of more than $200 million made the program too expensive to mandate, so it, too, became voluntary. The state makes about $35 per student available to districts choosing to undertake both extensions, much less than the calculated costs.

In Florida, one of several methods used to determine the cost of adding a seventh period to the school day (increasing the minimum number of hours to 1,050) simply took one-sixth of the current cost of high school education; the result was an estimated cost of more than $100 million. Another method used a different base, not the minimum 900 hours of high school study required but the 950 hours that proved to be average practice. The result was a lower but still substantial figure: $66 million. In the end, $27 million was made available for 1984 for adding a seventh period; schools volunteer to add the period and use it for mathematics and science courses that help students meet new requirements for high school graduation.

Texas separated salary costs for teachers and administrators from all other costs, which were determined by multiplying 5/175 (the ratio of the extension to the old base) by the cost of transportation, food, operation, maintenance, support staff, etc. Costs for teachers and administrators were included in the overall pay increase package.

All four states will fund the total cost of the longer days and years but will distribute funds to local districts in different ways. Arkansas and Texas, which make extensions mandatory, will distribute the funds through new school finance formulas; California and Florida will award flat grants to school districts voluntarily participating in the program. In California, districts that already have extensions in place will receive extra funds as well.

In summary, the dominant method for determining the costs of extending school days or years is to multiply the ratio of the extension and the old base by instructional costs, all noninstructional costs or both. States that identify costs discover early on that the price is high and make extensions voluntary; Arkansas skirted this issue somewhat by assuming the new dollars were sufficient rather than predetermining costs. Allocating the funds through the school finance formula if the program is mandated seems to be standard practice; where programs are voluntary, allocations are through flat grants.

Extensions of school days and years have been modest, in part because longer extensions are expensive. However, these small extensions can result in significant increases in student-engaged learning time if used for inservice training (Rosenshine, 1983). Larger extensions could be a waste of money, since mechanistic increases in school days and years are not significantly related to student achievement (Levin, 1983).

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Smaller Classes or Additional Staff

Since even small reductions in class size are very expensive, only some states reduced class sizes and then only in limited types of classes. Arkansas adopted new standards that reduce class size to a maximum of 23 in grades 1 and 2. California mandated strengthened guidance counseling in the 10th grade. Florida expanded a writing program: in participating schools, high school English teachers have no more than 100 students, and they are to assign and correct one writing assignment per week. Florida also added secondary reading specialists. Texas proposes to reduce class size to 20 pupils in grades 1 and 2.

Calculating the costs for these programs was relatively straightforward, and each state used approximately the same methodology. The number of additional teachers or staff needed was determined, usually by school district and usually with data available in the state department of education. This number was then multiplied by an average salary-and-benefits figure. States solved technical difficulties (whether to use last year's average salary or a predicted next year's average, whether to include all benefits and Social Security costs, etc.) in various ways.

Programs in California and Florida were categorical. Funds, all from the state, were allocated to school districts as flat grants. In Arkansas and Texas, the programs were part of larger, state-mandated reforms and funds were allocated through new school finance formulas.

Reducing class size was a modest component of reform packages because the cost of even small reductions is high. Further, most staff interviewed knew that major class size reductions (to 16 students) are needed to have a significant impact on student achievement (Glass and Smith, 1979).

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Stiffer Requirements for High School Graduation

Arkansas, California, Florida, South Carolina and Texas increased the number of courses students must complete to graduate from high school, but only partially costed-out and funded these new requirements.

Arkansas did not estimate costs, assuming that increases in state aid would cover them. California merely reinstated minimum high school graduation requirements that total only 11 credits, far below the practice in most districts, and provided no extra funds. Florida students must now receive a total of 24 credits to graduate from high school, the highest requirement in the country. The one attempt to identify the cost of meeting the new requirements compared current course offerings to the new requirements. An assumption was made that some old courses would be dropped as new courses were added but that there would be a net gain in courses. Although the estimated costs were substantial, in the end, no separate appropriation was made to meet them; the only extra money is the $27 million districts may use to add a seventh period.

South Carolina approached the issue of cost most directly. The state education department estimated the number of new teachers needed to offer the new courses required in mathematics and science, then multiplied this number by the average teacher salary and added benefits. Staff assumed net additional courses with no deletions of current courses. The minimum extra cost was $5 million.

New requirements for high school graduation in Texas will be part of a total restructuring of the high school curriculum. Funds for this restructuring will be allocated through a new school finance formula; no individual new requirement will receive a separate cost estimate.

The states studied and the rest of the 30 states that have raised high school graduation requirements since 1980 are providing very little extra money to fund these new requirements. There is an assumption that school districts will somehow comply, perhaps by dropping courses now seen as superficial. Over time, however, the real costs will emerge. New curricula, new instructional materials and trained teachers may be needed, as well as ways to combine these elements.

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More Student Testing

States are interested in testing more students, more often, in more subjects and for more purposes. Five of the eight states studied expanded state testing programs; Florida already has an extensive program. Arkansas now requires 8th-grade students to go through a "promotional gate" by passing a test before they enter high school. South Carolina will require high school seniors to pass an exit examination before they graduate. California set up honors examinations for high school students. Texas is proposing that students at all grade levels pass tests before they are promoted to the next grades.

Estimated costs of testing programs were low, perhaps because they covered only developing, printing, correcting and, in some cases, administering the tests and may have seriously underestimated secondary effects and downstream costs. Only South Carolina acknowledged that a secondary effect of its exit exam will be remedial services for students who do not pass. Its education reform program includes a comprehensive remedial program for all students at each grade who do not meet minimum performance standards. The cost of this remedial program — $59 million — equals 30% of the cost of South Carolina's entire education reform program.

Dissatisfaction with "social promotion" (the practice of promoting students on the basis of attendance more than of performance) undergirds much of the heightened interest in testing. But research provides no clear support for the shortcomings of social promotions nor for the advantages of promotional gates (La Baree, 1984). Students who are held back need special help, and the number of years a student can be held back is limited. Underperforming students who are promoted also need special help. In the long run, the real issue seems to be whether students who perform below standards receive special help, not whether they are promoted or held back. Requiring students to pass exit examinations or other types of minimum competency tests is one way to raise standards and improve performance, but other ways are likely to be as successfull (Anderson, Citron and Pipho, 1983).

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Prekindergarten Programs for Disadvantaged Children

South Carolina and Texas both propose to sponsor preschool programs for 4-year-olds who are educationally disadvantaged. The rationale comes from research that shows early intervention can be a cost-effective way to reduce the need for remedial services in later grades (Weikart, 1982). In both states, the number of children eligible was estimated from available data; the cost was simply the number of teachers needed times average salary and benefits. In Texas, one teacher and two aides were proposed for each group of 35 4-year-olds.

Other states have discussed the efficacy of providing public schools for 4-year-old children. In 1983, the New York commissioner of education proposed dropping the school-starting age to four and eliminating the last year of high school. Unless such grade-for-grade trade is made, however, the cost of serving 4-year-olds in the public schools is high.

Wholesale public education for 4-year-olds could have two questionable effects. Initially, large investments of state money would simply replace private money for the many families that already pay for preschool services on their own. There is also the danger that, as with K–12 programs, public preschool programs would become remarkably similar across the country, thus reducing choices that now range from structured Montessori programs to in-house day care. The cost-effective approach may be that taken by South Carolina and Texas — providing preschool only to at-risk or educationally disadvantaged students.

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School Improvement Programs

Most education reform programs focus on the hardware of reform — more courses, tougher courses, increased requirements, higher standards, longer days, extended years. But many researchers suggest that developing an infrastructure for educational change will increase the likelihood of successfully meeting new standards (Boyer, 1983; Goodlad, 1983; Odden, 1984; and Sizer, 1984). This would require strengthening the instructional effectiveness of teachers, developing in principals the skills to be instructional leaders, implementing the characteristics of effective schools and developing each school's capacity for ongoing improvement. Research has identified numerous school improvement initiatives, many of them low-cost (Cohen, 1983; Odden, 1984; and Crandall et al., 1983), and states and school districts have already implemented many programs based on this research (Odden and Dougherty, 1982). Recent research suggests that many state education departments are augmenting their ability to help districts improve program quality (Burnes, Furhman, Odden and Palaich, 1983).

In Arkansas, which has a very interesting and extensive inservice training program for instructional effectiveness (Odden, 1983), the state education department (now with about 150 staff) received 46 new positions to help districts implement the new education standards, to expand training in instructional leadership for principals and school board members, to train teachers in classroom management, to develop an effective schools program, to train principals and teachers in schools where students are poor readers and to train parents how to teach at home. The cost of these programs — a few million dollars — is insignificant compared to the $200 million cost of the entire education reform program. But the payoff should be high.

California has established teacher centers and regional computer centers for inservice training and has expanded the school improvement program. South Carolina based a new teacher training program on the Arkansas model, expanded its administrator academy and funded a principal assessment center, all for less than $2 million. Utah put $1 million into a school productivity program that provides seed money to local districts to restructure staffing and program delivery. Several local initiatives have yielded substantial dividends — cost savings far greater than amounts expended.

These school improvement programs were funded by small sums of money people "felt" would be sufficient. The new programs have also received modest funding, but staffing them adequately will probably require supplemental funding over time.

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Merit Schools

Emerging in these eight states and elsewhere around the country are "merit school" programs. A state program in South Carolina, based on the program now in place in Columbia, South Carolina, provides a $10 bonus per student for specified school-level improvements, up to a maximum of four. Student achievement must be one of the four improvements. Others include student and teacher attendance, drop-out rates and community satisfaction. The state appropriated $28 million for the fourth year of the program. Merit school programs have been proposed in both Florida and California for the 1985 school year.

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School Finance Reform

Although some experts were concerned that fiscal equalization might by overlooked in the enthusiasm for education excellence, that fact is that the eight states studied have improved and increased funding of school finance formulas.

Three states combined school finance reform with education reform. When the state supreme court required Arkansas to revise its school finance formula (essentially a total-dollar/save-harmless plan), the legislature devised a pupil-weighted foundation program that incorporates funding for the handicapped, vocational education, textbooks and some other small programs. All new dollars will be allocated through this new program, which also requires property tax increases in nearly one-third of all school districts. Next year, Illinois plans to consider a package that will include several education reforms, an overhauled school finance formula based on a two-year state board study, property tax reduction and probably reinstatement of the temporary state tax hikes that expired in mid-1984. Texas

will design an entirely new, program-driven foundation program through which it plans to allocate all new money for education reform.

The five other states modified their formulas. California streamlined its revenue-limit formula. The hold-harmless provision was changed from a total to a per-pupil basis. The revenue limits were moved from a percentage to a fixed-dollar amount, which provides low-spending districts more money on a percentage basis; limits were differentiated for elementary, high school and unified districts. The revenue limits for low-spending districts were brought to within $50 of the previous year's average for 1984 and to the previous year's average for 1985. The state allocated most of the $800 million for its reform through this revised formula. The revenue limits were increased an average of 8%. Funding for categorical programs rose by 6% with special education receiving an 8% hike.

Since 1973, Florida has had a sophisticated pupil-weighted foundation formula that allows very limited local leeway above it. When the state increased aid by $166 million, 75% ($123 million) was added to the formula, thus increasing funding for general aid as well as for categorical programs. The local property tax required under the formula also was raised to improve overall fiscal equity.

South Carolina, which enacted a school finance reform in 1979, is adding a K–12 compensatory education program, making adjustments to the special education program and allocating about 75% of the new funds through its pupil-weighted foundation formula. Tennessee allocated 50% of new funds through its formula (which was streamlined in 1977), and Utah adjusted its formula (revised in 1973) and allocated 61% of new funds through it.

Since half or more of all money for education reform is being allocated through school finance formulas, finance equity clearly is not being shoved aside in the rush toward excellence. Although school finance reform and fiscal equalization have received less publicity than education reforms, the fact is that they continue to receive significant attention and substantial new funding. Categorical funding also has held its own, increasing as general aid increases in states that use pupil-weighted formulas. There is little evidence of reallocations from fiscal equalization to education excellence. Most new funds flow through school finance formulas; the only significant exception is funding for new career ladder programs, which, in all cases but one, represent less than 25% of the increase in state aid.

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Final Comments on Cost and Allocation

Attention to the long-run costs of reform is mixed. South Carolina estimated five-year costs, Tennessee and Texas three-year costs, California and Florida two-year costs for some programs. Arkansas and Utah did not identify long-term costs. Although two years or less is often "long-term" in politics, states would be wise to look farther ahead. Raising salaries for beginning teachers and increasing high school graduation requirements have substantial costs beyond two years.

States seem to be more active than local governments or the federal government in education reform and funding it. This means that involvement in state politics is the prerequisite for affecting education reform.

The sales tax seems to be the preferred source of new revenues for education excellence. Arkansas and South Carolina raised the sales tax a full penny, Texas hopes to raise it a penny, Utah made permanent a one-half-cent sales tax. Florida, which in 1983 enacted a new tax on the foreign income of state-based corporations (which likely will be reduced in the future), raised the sales tax by a penny in 1982. But California funded its plan mainly through revenue growth and closing tax loopholes, and Illinois seems likely to raise the income tax and reduce property taxes in 1985.

Even though many states have taken the tough political step of raising taxes to finance education reform, the new funds still fall far short of reasonable estimates of costs. The American Association of School Administrators (1983) studied the costs of implementing the recommendations made in *A Nation at Risk* and estimated that an average increase of 28% was needed. The estimate of a prominent national expert in education was 20–25% (Howe, 1983). A study of the 1983 recommendations of the Regents in New York State also produced an estimate of 20–25% (Wagner, 1984), and the total estimated real costs of the reforms in some of the states studied approximated 25%. But actual allocations represent increases of only 6% to 17%. These large and politically difficult allocations are not large enough; education excellence reforms are being underfunded. Unless funding increases further, the country will not reach the lofty goals of the national reports — or the goals will have to be scaled down.

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4. The New School Finance

Education reform has placed new issues on the school finance agenda. Disparities in expenditures per pupil and their relationship to local property wealth per pupil remain important and are continuing to receive significant attention. But expanding the traditional agenda is the need to determine the costs of new education programs. Salary structures need revision. Rationales are needed for determining which level of government should pay for new programs and for deciding how to distribute state funds to school districts and teachers. Less specific but perhaps even more important, scholars and policy makers need to merge the traditional and the new agendas into integrated education policies undergirded by appropriate finance and governance structures. For finance, this requires identifying: (1) the finance aspects of the new equity issues raised by education reform; (2) the new issues in traditional school finance; and (3) the new issues raised by social and economic changes broader than the specifics of education reform.

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A New Equity Agenda and Its Finance Implications

The goal of education reform today is to bring excellence to the nation's public schools, not necessarily to emphasize equity, access and fairness. Whatever the tension between the old equity agenda and the new excellence agenda, education reform programs raise at least four new equity issues, all of which have finance implications: the differential impact of higher standards and tougher requirements, differential access to new curricula and better teaching, differential access to master teachers and master teacher programs, and differential access to computers.

Higher Standards and Tougher Requirements

Raising standards and tightening requirements are likely to be only the first steps in a process. Some students will fail to meet the new standards, and some will have difficulty fulfilling the new requirements. What does a school system do then? At some point, it must provide additional instructional services, and this will be expensive. At a cost of nearly 33% of all new money for education, South Carolina has developed a K–12 state compensatory education program for students who do not pass new state-required tests. California and Florida already have remedial programs in place but may need to expand them. Arkansas and Tennessee have given school districts responsibility for students who fail to meet the new requirements, but experience elsewhere suggests that a future state role is likely.

The imposition of higher standards raises other questions of equity. Will students who fail to meet new standards be predominantly low-income and minority students? Will rates of failure be higher in school districts with below-average fiscal resources? Will dropout rates rise as the spending of districts or schools decreases? If so, corrective state policies will be needed.

New Curricula and Teaching Policies

As states set new curricula and teaching policies, analysis of the use of resources within school districts and schools becomes necessary. School finance studies need to go beyond district-level dollar allocations and investigate student access to curricula content, engaged learning time and effective teaching.

Student achievement relates to the content of the material taught (Kirst, 1983). Even when a specific curriculum is required, topics covered in classrooms can vary enormously (Denham and Lieberman, 1980). Moreover, the time students are actively engaged in learning a given curriculum varies across classrooms within schools and across schools within school districts (Denhan and Lieberman, 1980). Effective teaching and the teaching of higher-order skills also varies dramatically (Goodlad, 1983). These issues of access and equity within schools are at least as important as the traditional issues of fiscal distribution, suggests Kirst, and he finds some evidence that access to curriculum content, learning time and effective teaching differs with student ethnic and income characteristics as well as with school and district fiscal characteristics. Analyzing these issues should have high priority, especially since curriculum and teaching are central to education reform.

Distribution of Master Teachers

Although new state programs to improve the economic rewards for teaching are broad-based and comprehensive, most states have not addressed how these new programs merge with the serious inequities in teacher compensation embedded in current systems. High-spending districts already pay teachers significantly more than low-spending districts, and they usually also have more teachers per student. On the basis of less quantitative evidence, high-spending districts also seem to have teachers with better training and better skills.

If master teacher and career ladder programs are to benefit students in all school districts, these inequities will need to be addressed. In states without quotas on the master teachers in each district (e.g., Tennessee), the distribution of master teachers across types of schools and school districts should be analyzed. This will allow identification of inequities in student access to the best teachers. In states with quotas, district definitions of master teachers should be analyzed to determine whether and how alternative definitions affect students. The effect of current salary and benefit inequities on state compensation programs should also be analyzed.

Access to Computers

Some evidence already suggests that more computers are available in wealthy, high-spending districts than in poor, low-spending districts (Quality Education Data, Inc., 1984), that more computers are available for students from high-income families and that computers are used for different purposes with different types of students (Center for Social Organization of Schools, 1983, 1984). They are used to teach low-income and minority students basic skills; higher-income students learn higher-order skills. This evidence suggests at least two links between school finance policy and computer policy that states may need to investigate. The first concerns equity of access to computer hardware and software and the degree to which access relates to the traditional issues of differential resources per pupil across school districts (Pogrow, 1983a). The second concerns the use of computers and telecommunications technologies within districts and schools and the degree to which use relates to economic and finance variables.

Since the funding of education reform is less than estimated costs, more efficient ways to deliver education services are needed. Computers offer a significant alternative (Pogrow, 1983b) and additional ways to use computers to reduce education costs need to be explored. ★

Education Reform and New School Finance Issues

Related to traditional equity issues in school finance are four new issues raised by education reform: the movement to finance programs and services rather than to use dollar-level formulas; the financing of some education excellence initiatives outside school finance formulas; a comparison of funding for school finance and categorical programs with funding for education excellence programs; and shifts in the local and state tax burdens as states raise taxes to finance education excellence.

New Types of School Finance Formulas

States policy makers began in the late 1970s to ask how school finance formulas could relate more to the education programs and services they financed. Movement in this direction is more apparent in the 1980s. Although most of the money for education reform is being allocated through traditional formulas, the purposes of state aid are now specified: to fund across-the-board increases in teacher salaries, to finance extensions of the school day or year, to fund testing programs, to reward outstanding performance. Some states developing new formulas identify the programs and services the state wants to include in the foundation program and then calculate costs for each district. Illinois has been developing this "resource cost model" for the past two years (Chambers and Parrish, 1982), and Alaska is in the process of adopting it. Texas, as mentioned previously, is developing a similar approach. Other states are likely to move in this direction.

State/Local Tax Burdens

In the 1970s, when school finance reform and property tax reduction were strongly linked (Callahan and Wilken, 1976), a shift from local property taxes to higher state income and sales taxes produced a tax system that was more progressive. That is, taxes as a percentage of income declined for lower-income families and rose for upper-income families. The reverse seems to be true today. Property taxes — the most regressive tax — have risen, in part to offset declines in federal aid and in part to augment local budgets when state revenues were squeezed by the national recession. Some states — Florida and Arkansas, for example — also are requiring local property tax increases as part of education reform packages. Further, many states are financing reforms by raising the state sales tax, a tax that is at best proportional (equally burdensome on all taxpayers), but usually regressive (most burdersome on the poor).

This retreat on tax reform should be documented and analyzed; pushing for excellence in one area and increasing inequity in another makes little sense. Over time, the public senses the equity or inequity of state and local taxes; public dissatisfaction with the property tax helped motivate the tax and school finance reforms of the 1970s. It would be unfortunate if progress toward education excellence were halted by public dissatisfaction with the means of funding it.

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Distribution of Education Reform Dollars

Even though most new appropriations for education reform are allocated through fiscal equalization formulas, there is a tendency to view some reform initiatives (e.g., career ladders) as new and separate programs that should be funded by categorical, flat grants. Whether initiatives funded outside the formula enhance or weaken equity remains an issue that every state should address. No state reached the fiscal equity objectives of any school finance reform of the 1970s (Brown and Elmore, 1983; and *Journal of Education Finance*, vol. 8, no. 4, vol. 9, no. 1, 1983). Progress toward equity, or the lack of progress, remains an issue.

Funding Equity and Excellence

Adequacy of funding and the distribution of state aid to core educational programs, traditional equity programs or new excellence programs are all important issues. In the eight states studied, there does not seem to be a trend toward allocating most new funds to excellence initiatives without increasing aid to other programs. In fact, the reverse is true: excellence initiatives in most states are small, categorical programs, receive relatively small allocations, and most state aid increases are allocated to the school finance formula and traditional categorical programs (e.g., state compensatory, bilingual and special education programs). Nevertheless, since the funding of traditional equity programs has received relatively little publicity, it would seem prudent for states to maintain a record of how funds are allocated among programs, if only to demonstrate that progress is being made toward equity as well as excellence.

New School Finance Issues

There are limits on how states can alter the state and local tax system (Gold, March 1984). Partly as a result of these limits, schools have begun to find new sources of funds. The costs of pension programs, generally ignored in the 1970s, are rising. There is debate on whether property taxes will increase or decrease. These are among the intriguing new problems of school finance discussed below.

New Sources of Funds

The intergovernmental fiscal system in this country is quite resilient. In the 1970s, when property taxes became an unpopular source of school funding, states responded by more than doubling their fiscal role. In the early 1980s, when states felt strong fiscal constraints and the federal government reduced support for education, local property taxes rose. It seems that when one avenue of funds is blocked, other avenues open up. Since the use of local and state taxes for education has been restricted in nearly all states, it is not surprising to find that private sources of education funding are being sought and found.

Education Foundations. One new source is the local education foundation, a private entity that provides extra revenue for school districts. This sort of foundation provides supplemental funding for school districts, expands communication between schools and the public and brings more people into the governance of schools. Whether the directors of foundations (who are not elected) will usurp the policy-setting function of elected boards is one concern. Whether foundations will erode general support for education and whether they will grow large enough to affect school finance equity are other concerns.

States, too, are setting up education foundations. West Virginia established a state foundation with a $95,000 grant; it is giving mini-grants to teachers to develop innovative programs. Arizona's foundation, conceived to be a multi-million dollar operation, initially has funds to give travel money and a bonus to the state's teacher of the year. Kentucky also has developed a state foundation.

Education foundations have so far remained small. Most spend less than $110,000 a year, which is only a small fraction of a district's operating budget (Bergholz, 1984). Foundations nonetheless proved very popular in California after Proposition 13 passed, and they are popular in other states where districts experience fiscal pressures. They should be monitored closely to learn whether they move beyond a marginal fiscal role.

Fee-for-Service Activities. One of the most dramatic responses to Proposition 13 in California was the new practice of charging fees for programs that had been free, such as cheerleading, band and after school sports. The California Supreme Court recently ruled that such charges are unconstitutional, because those extracurricular activities are part of a school's core program. But other fee-for-service activities are unlikely to be overturned by the courts. For example, public schools have begun to charge fees for summer computer camps. Some schools now provide daycare for students from seven in the morning until six at night, charging an extra fee for students who participate. Schools with extra space have initiated preschool programs, usually paid for entirely by parents who enroll children. Programs for adults, from computer training to liberal arts classes, are paid for by the participants.

Entrepreneurial activities like these supply schools with additional revenue and offer teachers opportunities for new work and more pay. As these activities expand, their role in the financing and governance of public schools may need to be scrutinized more closely.

Business/School Partnerships. Business/school partnerships supply anything from free tutoring to equipment for computer labs, summer jobs for students and teachers, salary supplements for mathematics and science teachers and outright financial grants. They also expand participation in the governance of the schools, either formally or informally.

The positive short-run political effect of partnerships has been to involve the business community in the schools and help it redefine its stake in the future of public education. State-level partnerships also have been an important factor in the politics of education reform. The Business Roundtable played a key political role in the enactment of California's omnibus education act of 1983, and the support of the business community in South Carolina was vital to reform there. State business groups are studying the public schools in Minnesota, Washington and elsewhere. The ECS Task Force on Education for Economic Growth crossed state boundaries to involve corporate executives in developing, funding and implementing education excellence programs.

One of the many issues that can — and should — be raised about renewed business involvement in public schools is whether it helps all types of schools equally (Caldwell, 1984).

Pension Costs

The problem of funding teacher retirement programs is becoming more urgent. In legislation enacted this year, Maryland cut future pension benefits to finance education reform initiatives; Alabama, Arizona, California, Illinois and New Jersey also face pressing problems related to the costs of pension programs (Ranbom, 1984). In many states, there are proposals to cut retirement benefits, discourage early retirement and require teachers to pay more into retirement systems.

Many factors contribute to the problem:

- ★ Historical underfunding by state and local governments
- ★ The aging of the teacher force (as many as half the people currently in teaching may retire in the next 10 years)
- ★ Inflation in pension costs, especially in states with built-in cost-of-living escalators
- ★ Increases in the cost of fringe benefits, including retirement (retirement benefits, which require no immediate funding, have often been traded for salary increases for districts with older teaching forces [Wilken, 1984])

Combined, these factors suggest that revenues to fund pension systems must increase or benefits will need to be cut. The substantial attention states are paying to teacher compensation raises other problems for retirement programs. Teachers who retire in the next 5 to 10 years, after receiving across-the-board raises and higher pay from career ladder programs, may earn retirement salaries far beyond current actuarial projections.

In short, the issue of pension costs, a future issue 10 and 20 years ago, will be a present issue from now on. How states will trade off their best interests and the interests of retiring teachers should be clear by the end of the decade (Taylor, forthcoming).

Other Issues

Much discussed recently are "system incentives," i.e., mechanisms that spur innovation, reward superior performance (of students, teachers, schools and districts) and create fiscal flexibility in an increasingly rigid system. States now use formulas to allocate most funds to districts, and most districts use additional formulas to fund schools and classrooms. Yet greater flexibility can produce good results. Grants for schools that show productivity gains have been successful in some districts (Houston, Texas, and Columbia, South Carolina, for example). Grants of this sort are included in the reform program in South Carolina and are being proposed in Florida and California. "Merit pay" for teachers is based on the assumption that the compensation system should offer incentives for outstanding performance. Mini-grants to teachers for program development are creeping into nearly all education reform programs, and administrators are being given seed money to identify cost-saving initiatives (e.g., the productivity program in Utah). More fiscal incentives are likely in the next several years.

Choice in education is taking a variety of forms. The emphasis today is on choice within the public sector. "Fundamental" and "open/living" public schools have proved popular in some large districts. Program evaluations have documented the success of magnet schools in implementing desegregation and increasing public satisfaction with schools. Parents who have selected preschools from a variety of options are demanding similar levels of choice when their children reach school age. Offering students and parents their choice of public school program does, however,

add to the cost of education (especially if districts provide transportation), and it increases the complexity of financing and school operations.

Partly because research has shown that the individual school is the unit of school improvement, there is a resurgence of interest in school-based management and school-site budgeting, with talk in some states of school-based formula funding. Since state technical assistance programs increasingly target individual schools (Burnes, Fuhrman, Odden and Palaich, 1983) and since many states have extensive school-based data systems, developing finance formulas school by school is technically possible in the immediate future. Developing school-based finance, budget, management and improvement systems will, however, take time.

References

The asterisked (*) items in each category provide brief overviews of the particular issues.

General Context

Adams, E. Kathleen. *A Changing Federalism: The Condition of the States*. Denver, Colo.: Education Commission of the States, 1982.

Garms, Walter and Michael Kirst. "The Political Environment of School Finance Politics in the 1980s," in *School Finance Policies and Practices, the 1980s: A Decade of Conflict*, James W. Guthrie, ed. Cambridge, Mass.: Ballinger Publishing Co., 1980.

*Gold, Steven. "State Tax Increases of 1983: Prelude to Another Tax Revolt," *National Tax Journal*, vol. 37, no. 1, March 1984.

Gold, Steven and Karen Benker. "State Fiscal Conditions Entering 1983," Legislative Finance Paper no. 35. Denver, Colo.: National Conference of State Legislatures, January 1983.

Gold, Steven and Karen M. Benker. "State Budget Activities in 1983," Legislature Finance Paper no. 38. Denver, Colo.: National Conference of State Legislatures, September 1983.

*Gold, Steven and Corina L. Eckl. "State Fiscal Conditions Entering 1984," Legislative Finance Paper no. 42. Denver, Colo.: National Conference of State Legislatures, February 1984.

Gold, Steven and George Pederson. *State and Local Fiscal Relations in the Early 1980s*. Washington, D.C.: The Urban Institute, 1983.

*Rosenthal, Alan and Susan Fuhrman. *Legislative Education Leadership*. Washington, D.C.: The Institute for Educational Leadership, 1981.

School Finance Project. *The Prospects for Financing Elementary/Secondary Education in the States*. Washington, D.C.: The National Institute of Education, December 1982.

★

Effective Schools/ School Improvement

Boyer, Ernest. *High School*. Washington, D.C.: Carnegie Foundation for the Advancement of Teaching, 1983.

Brophy, Jere E. "Classroom Organization and Management," *Elementary School Journal*, vol. 83, no. 4, March 1983.

Cohen, Michael. "Instructional, Management and Social Conditions in Effective Schools," in *School Finance and School Improvement: Linkages for the 1980s*, Allan Odden and L. Dean Webb, eds. Cambridge, Mass.: Ballinger, 1983.

Crandall, David and Associates. *People, Policies and Practices: Examining the Chain of School Improvement*. Andover, Mass.: The Network, 1983.

Denham, Carolyn and Ann Lieberman, eds. *A Time to Learn*. Washington, D.C.: The National Institute of Education, 1980.

Good, Thomas. "Research on Classroom Teaching," in *Handbook of Teaching and Policy*, Lee S. Shulman and Gary Sykes, eds. New York: Longman, 1983.

Goodlad, John I. *A Place Called School*. New York: McGraw-Hill, 1983.

*Manassee, A. Lorri. "Improving Conditions for Principal Effectiveness: Policy Implications of Research on Effective Principals." Paper prepared for the National Institute of Education under Contact no. 400-79-0035, June 1983.

Miles, Matthew, Eleanor Farrar and Barbara Neufield. "The Extent of Adoption of Effective Schools Programs." Cambridge, Mass.: The Huron Institute, 1983.

Odden, Allan. "School Improvement in Arkansas: A Case Study." Working Paper no. SI-84-2. Denver, Colo.: Education Commission of the States, 1983.

Odden, Allan. "State Leadership and School Independence: The State Role in Creating and Sustaining Effective Schools." Denver, Colo.: Education Commission of the States, 1984.

Odden, Allan and Van Dougherty. *State Programs of School Improvement*. Denver, Colo.: Education Commission of the States, 1982.

Purkey, Stewart and Marshall Smith. "Effective Schools: A Review," *Elementary School Journal*, vol. 83, no. 4, March 1983.

Rosenholtz, Susan. "Interpreting the Evidence on Effective Schools," *American Journal of Education*, forthcoming.

Rosenholtz, Susan and Mark Smylie. "Effective Teaching Strategies: A Synthesis of Classroom Research." Paper prepared for the Tennessee State Department of Education, December1983.

Rosenshine, Barak. "Teaching Functions in Instructional Programs," *Elementary School Journal*, vol. 83, no. 4, March 1983.

Sizer, Theodore. *Horace's Compromise: The Dilemma of the American High School*. New York: Houghton-Mifflin Company, 1984.

★

School Finance and School Improvement

American Association of School Administrators. "The Cost of Reform: Fiscal Implications of *A Nation at Risk*." Arlington, Vir.: American Association of School Administrators, 1983.

Burnes, Donald, Susan Fuhrman, Allan Odden and Robert Palaich, *State-Initiated School Improvement: A Study of Four States*. Denver, Colo.: Education Commission of the States, 1983.

Howe, Harold, II. "Education Moves to Center Stage: An Overview of Recent Studies," *Phi Delta Kappan*, vol. 65, no. 3, November 1983.

Kirst, Michael. "A New School Finance for a New Era of Fiscal Constraint," in *School Finance and School Improvement: Linkages for the 1980s*. Allan Odden and L. Dean Webb, eds. Cambridge, Mass.: Ballinger, 1983.

*Odden, Allan. "Financing Educational Excellence," *Phi Delta Kappan*, vol. 65, no. 5, January 1984.

Odden, Allan and L. Dean Webb, eds. *School Finance and School Improvement: Linkages for the 1980s*. Cambridge, Mass.: Ballinger, 1983.

Thompson, John. "Costs Associated with Reward for Performance Pay Plans: A Preliminary Analysis." Denver, Colo.: Education Commission of the States, 1984.

Wagner, Alan. "Financing Improvements in Educational Quality," in *The National Reports: Recommendations for Improvements in Educational Quality*. Albany, N.Y.: Rockefeller Institute of Government, State University of New York, 1984.

★

New Issues

Anderson, Beverly, Christiane Citron and Chris Pipho. "Achievement Standards and Requirements for High School Graduation." Denver, Colo.: Education Commission of the States, August 1983.

Bergholz, David. President, Public Education Fund, Pittsburgh, Penn. Personal Correspondence, 1983.

Caldwell, Richard. "An Equitable Framework for Corporate Participation in the Public Schools." Denver, Colo.: Education Commission of the States, 1983.

Center for Social Organization of Schools. "School Uses of Micro-Computers," Newsletter. Baltimore, Md.: John Hopkins University. April 1983, June 1983, October 1983, February 1984.

Darling-Hammond, Linda, Arthur Wise and Sara R. Pease. "Teacher Evaluation in the Organizational Context: A Review of the Literature," *Review of Educational Research*, vol. 53, no. 3, Fall 1983.

Glass, Gene V. and Mary Lee Smith. "Meta-analysis of the Research on Class Size and Achievement," *Educational Evaluation and Policy Analysis*, vol. 1, no. 1, 1979.

Labaree, David. "Setting the Standard: Alternative Policies for Student Promotion," *Harvard Education Review*, vol. 54, no. 1, February 1984.

Levin, Henry M. "About Time for Educational Reform." Project Report no. 83-A19. Stanford, Calif.: Institute for Research on Educational Finance and Governance, Stanford University, August 1983.

Mitchell, Douglas E., Flora Ida Ortiz and Tedi K. Mitchell, "What is the Incentive to Teach?" *Politics of Education Bulletin*, vol. 11, nos. 2, 3, Spring 1984.

Palaich, Robert and Ellen Flannelly. "Improving Classroom Teaching Through Incentives." Denver, Colo.: Education Commission of the States, April 1984.

Pogrow, Stanley. *Education in the Computer Age: Issues of Policy, Practice and Reform*. Beverly Hills, Calif.: Sage, 1983a.

Pogrow, Stanley. "Linking Technology Use to School Improvement: Implications for Research, Policy and Practice," in *School Finance and School Improvement: Linkages for the 1980s*, Allan Odden and L. Dean Webb, eds. Cambridge, Mass.: Ballinger, 1983b.

Quality Education Data, Inc. "Micro-Computer Data." Denver, Colo.: Quality Education Data, Inc., January 1984.

Ranbom, Sheppard. "State Efforts to Control Pension Costs," *Education Week*, vol. 3, no. 24, March 7, 1984.

Taylor, Suzanne. *The Governance and Finance of Teacher Retirement Systems*, forthcoming.

Weikart, David P. "The Cost-Effectiveness of High Quality Early Childhood Programs." Presentation to the Southern Legislators Conference, Hilton Head, South Carolina, December 12, 1982.

Wilken, William. "Teacher Compensation: The Need for a New Direction." Paper prepared for the Committee for Economic Development. New York: Committee for Economic Development, January 1984.

★

School Finance Equity

Augenblick, John and C. Kent McGuire. "Changes in the Equity of School Finance Systems in Oklahoma, Delaware and Alaska," *Journal of Education Finance*, vol. 8, no. 4, Spring 1983.

Berne, Robert and Leanna Stiefel. "A Methodological Assessment of Education Equality and Wealth Neutrality Measures," Paper no. 17. Denver, Colo.: Education Commission of the States, July 1978.

Berne, Robert and Leanna Stiefel. "The Measurement of Equity in School Finance With an Expenditure Disparity Measure," Paper no. 19. Denver, Colo.: Education Commission of the States, November 1978.

Berne, Robert and Leanna Stiefel. "The Equity of School Finance Systems Over Time: The Value Judgments Inherent in Evaluation," *Educational Administration Quarterly*, vol. 15, no. 2, Spring 1979.

Berne, Robert and Leanna Stiefel. "School Finance Reform: Optimistic Findings," Working Paper no. 16. New York: New York University, Public Policy Research Institute, June 1979.

Berne, Robert and Leanna Stiefel. "Taxpayer Equity in School Finance Reform: The School Finance and Public Finance Perspective," *Journal of Education Finance*, vol. 5, no. 1, Summer 1979.

*Berne, Robert and Leanna Stiefel. "Concepts of Equity and Their Relationship to State School Finance Plans," *Journal of Education Finance*, vol. 5, no. 2, Fall 1979.

Carroll, Stephen J. "The Search for Equity in School Finance," in *Financing Education*, Walter McMahon and Terry Geske, eds. Urbana, Ill.: University of Illinois Press, 1982.

Garms, Walter. "Measuring the Equity of School Finance Systems," *Journal of Education Finance*, vol. 4, no. 4, Spring 1979.

Hickrod, G. Alan, Ramesh Chaudhari and Ben Hubbard. *Equity Goals in Illinois School Finance: 1973–1979*. Normal, Ill.: Illinois State University, February 1979.

Hickrod, G. Alan et al. *Equity Measurements in School Finance in Indiana, Iowa and Illinois*. Normal, Ill.: Illinois State University, May 1980.

Journal of Education Finance, vol. 3, no. 4, Spring 1978; vol. 8, no.4, Spring 1983; vol. 9, no. 1, Summer 1983.

*Odden, Allan, Robert Berne and Leanna Stiefel. *Equity in School Finance*. Denver, Colo.: Education Commission of the States, October 1979.

★

School Finance Reform

Brischetto, Robert R., gen. ed. *Minorities, the Poor and School Finance Reform* (nine volumes). San Antonio, Texas: Intercultural Development Research Association, 1979.

Brown, Lawrence et al. "School Finance Reform in the Seventies: Achievements and Failures," *Journal of Education Finance*, vol. 4, no. 2, Fall 1978.

*Brown, Patricia and Richard Elmore. "Analyzing the Impact of School Finance Reform," in *The Changing Politics of School Finance*, Nelda Cambron-McCabe and Allan Odden, eds. Cambridge, Mass.: Ballinger, 1982.

*Callahan, John and William Wilken, eds. *School Finance Reform: A Legislator's Handbook*. Washington, D.C.: National Council of State Legislators, 1976.

Cambron-McCabe, Nelda and Allan Odden, eds. *The Changing Politics of School Finance*. Cambridge, Mass.: Ballinger Publishing Co., 1982.

Elmore, Richard and Milbrey McLaughlin. *Reform and Retrenchment: The Politics of California School Finance Reform*. Cambridge, Mass.: Ballinger Publishing Co., 1982.

Ginsberg, Alan and Jay Moskowitz. "Achieving Equity: Sources of Change in State School Finance in 1970s," paper presented at the 5th Annual Conference of the American Education Finance Association, March 1980.

Goertz, Margaret. *Money and Education: The Hard Choices Ahead*. Princeton, N.J.: Education Policy Research Institute, Educational Testing Service , December 1981.

Goertz, Margaret, Jay Moskowitz and Judy Sinkin. *Plain Talk About School Finance*. Washington, D.C.: National Institute of Education, May 1978.

Guthrie, James W. "Should Financial Support of Public Schools be Assumed Completely by States? (In the Negative)," *Educational Evaluation and Policy Analysis*, vol. 2, no. 1, January-February 1980.

Guthrie, James W., ed. *School Finance Policies and Practices, The 1980s: A Decade of Conflict*. Cambridge, Mass.: Ballinger Publishing Co., 1980.

Jordon, K. Forbis and Nelda H. Cambron-McCabe, eds. *Perspectives in State School Support Programs*. Cambridge, Mass.: Ballinger Publishing Co., 1981.

McGuire, Kent and Van Dougherty. "School Finance at a Glance: 1984." Denver, Colo.: Education Commission of the States, 1984.

McMahon, Walter and Terry G. Geske, eds. *Financing Education*. Urbana, Ill.: University of Illinois Press, 1982.

*Odden, Allan. *School Finance Reform in the States : 1981*. Denver, Colo.: Education Commission of the States, January 1981.

*Odden, Allan. *Education Finance in the States: 1984*. Denver, Colo.: Education Commission of the States, 1984.

Odden, Allan and John Augenblick. *School Finance Reform in the States: 1980*. Denver, Colo.: Education Commission of the States, April 1980.

Odden, Allan, C. Kent McGuire and Grace Belsches-Simmons. *School Finance Reform in the States: 1983*. Denver, Colo.: Education Commission of the States, January 1983.

Sherman, Joel D. and Pamela S. Tomlinson. "The Impact of School Finance Reform on Minorities: A Study of Seven Southern States," *Journal of Law and Eduction*, vol. 9, no. 3, July 1980.

★

Fiscal Response

*Adams, E. Kathleen. *Analysis and Comparison of Fiscal Response in Four States*. Denver, Colo.: Education Commission of the States, 1980a.

*Adams, E. Kathleen. *Fiscal Response and School Finance Simulation: A Policy Perspective*. Denver, Colo.: Education Commission of the States, 1980b.

Akin, John S. and Gerald E. Auten. "City Schools and Suburban Schools: A Fiscal Comparison," *Land Economics*, vol. 52, no. 4, November 1976.

Barro, Stephen M. *Theoretical Models of School District Expenditure Detemination and the Impact of Grants in Aid*, R-867-FF. Santa Monica, Calif.: The Rand Corporation, February 1972.

Black, David, Kenneth A. Lewis and Charles Link. "Wealth Neutrality and the Demand for Education," *National Tax Journal*, vol. 32, no. 2, June 1979.

Carroll, Stephen. *The Search for Equity in School Finance: Michigan School District Response to a Guaranteed Tax Base*, R-2393-NIE/HEW. Santa Monica, Calif.: The Rand Corporation, March 1979.

Feldstein, Martin. "Wealth Neutrality and Local Choice in Public Education," *American Economic Review*, vol. 65, no. 1, March 1975.

Ladd, Helen. "Local Education Expenditures, Fiscal Capacity and the Composition of the Property Tax Base," *National Tax Journal*, vol. 28, no. 2, June 1975.

Ladd, Helen. "State-Wide Taxation of Commercial and Industrial Property for Education," *National Tax Journal*, vol. 29, no. 2, June 1976.

*Tsang, Mun C. and Henry Levin. *The Impact of Intergovernmental Grants on Education Spending*, Project Report no. 82-A14. Stanford, Calif.: Institute for Research on Educational Finance and Governance, Stanford University, July 1982.

Vincent, Phillip and E. Kathleen Adams. *Fiscal Responses of School Districts: A Study of Two States — Colorado and Minnesota*. Denver, Colo.: Education Commission of the States, October 1978.

★

Cost-of-Education Indices

Antos, Joseph R. and Sherwin Rosen. "Discrimination in the Market for Public School Teachers," *Journal of Econometrics*, vol. 3, no. 3, 1975.

*Barro, Stephen. *Educational Price Indices: A State-of-the-Art Review*. Washington, D.C.: AUI Policy Research, March 1981.

Boardman, Anthony E., Linda Darling-Hammond and Stephen P. Mullin. "A Framework for the Analysis of Teachers' Demand and Supply," *Economics of Education Review*, vol. 2, no. 2, Spring 1982.

Chambers, Jay G. "The Development of a Cost of Education Index: Some Empirical Estimates and Policy Issues." Stanford, Calif.: Institute for Research on Educational Finance and Governance, Stanford University, August 1979.

Chambers, Jay G. *Educational Cost Differentials Across School Districts in California*. Denver, Colo.: Education Commission of the States, 1978.

Chambers, Jay G. *The Hedonic Wage Techniques as a Tool for Estimating the Costs of School Personnel: A Theoretical Exposition With Implications for Empirical Analysis*, Project Report no. 70-A14. Stanford, Calif.: Institute for Research on Educational Finance and Governance, Stanford University, 1979.

Chambers, Jay G., Allan Odden and Phillip E. Vincent. *Cost-of-Education Indices Among School Districts: An Application to the State of Missouri*. Denver, Colo.: Education Commisssion of the States, 1976.

Chambers, Jay and Thomas Parrish. *The Development of a Resource Cost Model Funding Base for Education Finance in Illinois*. Stanford, Calif.: Associates for Education Finance and Planning, December 1982.

Chambers, Jay G. and Phillip E. Vincent. *Analysis and Development of a Cost-of-Education Index for Use in the Florida Education Finance Program*, vols. I and II. Menlo Park, Calif.: SRI International, 1981.

Rosen, Sherwin. "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition," *Journal of Political Economy*, vol. 82, no. 1, January/February 1974.

Rosenthal, Alvin, Jay Moskowitz and Stephen Barro. *Developing a Maryland Cost of Education Index*. Washington, D.C.: AUI Policy Research, July 1981.

Stiefel, Leanna and Robert Berne. "Price Indexes for Teachers in Michigan: A Replication and Extension," Working Paper no. 23, Public Policy Research Institute, New York University, 1980.

★

Special Populations

Bernstein, Charles D. et al. "Major Policy Issues in Financing Special Education," *Journal of Education Finance*, vol. 1, no. 3, Winter 1976.

Kakalik, James S. "Issues in the Cost and Finance of Special Education," *Review of Research in Education*, vol. 7. Washington, D.C.: American Educational Research Association, 1979.

*Kakalik, James S. et al. *The Cost of Special Education*. Santa Monica, Calif.: The Rand Corporation, November 1981.

*Leppert, Jack and Dorothy Routh. *A Policy Guide to Weighted Pupil Education Finance Systems: Some Emerging Practical Advice*. Washington, D.C.: National Institute of Education, September 1979.

*McGuire, C. Kent. *State and Federal Programs for Special Student Populations*. Denver, Colo.: Education Commission of the States, April 1982.

*Moore, Mary T., Lisa Walker and Richard Holland. *Finetuning Special Education Finance: A Guide for State Policymakers*. Washington, D.C.: Education Policy Research Institute, July 1982.

Odden, Allan and C. Kent McGuire. "Financing Educational Services for Special Populations: The State and Federal Roles." Denver, Colo.: Education Commission of the States, May 1980.

★

Capitalization

*Gurwitz, Aaron S. *School Finance Capitalization*, N-1312-FF. Santa Monica, Calif.: The Rand Corporation, January 1980.

Gurwitz, Aaron S. "The Capitalization of School Finance Reform," *Journal of Education Finance*, vol. 5, no. 3, Winter 1980.

Newachek, P.W. "Capitalization: The Price of School Finance Reform," *Policy Analysis*, vol. 5, no. 1, Winter 1979.

Oates, W.E. "The Effects of Property Taxes and Local Public Spending on Property Values: An Empirical Study of Tax Capitalization and the Tiebout Hypothesis," *Journal of Political Economy*, vol. 77, no. 6, November/December 1969.

Oates, W.E. "The Effects of Property Taxes and Local Public Spending on Property Values: A Reply and Yet Further Results," *Journal of Political Economy*, vol. 81, no. 4, July/August 1973.

Vincent, Phillip E. and Raymond M. Reinhard. *Tax Burden Distribution and Property Tax Capitalization in School Districts in California*. Denver, Colo.: Education Commission of the States, March 1979.

*Wendling, Wayne. "Capitalization: Considerations for School Finance," *Educational Evaluation and Policy Analysis*, vol. 3, no. 2, March/April 1981.

★

Education Tax Burdens

*Aaron, Henry. *Who Pays the Property Tax?* Washington, D.C.: The Brookings Institution, 1975.

Augenblick, John. "Property Taxes and the Future of School Finance." Denver, Colo.: Augenblick, Van de Water and Associates, February 1984.

Gold, Steven. "Homeowner Property Taxes, Inflation and Property Tax Relief," *National Tax Journal*, vol. 34, no. 2, June 1981.

Gold, Steven. "Recent Developments in State Finances." *National Tax Journal*, vol. 36, no. 1, March 1983.

Goode, Richard. *The Individual Income Tax*. Washington, D.C.: The Brookings Institution, 1976.

McClure, Charles. "The 'New View' of the Property Tax: A Caveat," *National Tax Journal*, vol. 30, no. 1, March 1977.

Netzer, Dick. *Economics of the Property Tax*. Washington, D.C.: The Brookings Institution, 1966.

Netzer, Dick. "The Incidence of the Property Tax Revisited," *National Tax Journal*, vol. 26, no. 4, December 1973.

*Netzer, Dick. "Property Tax Issues for the 1980s." Washington, D.C.: Academy for State and Local Government, June 1983.

Netzer, Dick. "Local Alternatives to the Property Tax: User Charges and Nonproperty Taxes." Washington, D.C.: Academy for State and Local Government, December 1983.

*Odden, Allan and Phillip Vincent. *The Regressivity of the Property Tax*. Denver, Colo.: Education Commission of the States, December 1976.

Peckman, Joseph and Benjamin Okner. *Who Bears the Tax Burden?* Washington, D.C.: The Brookings Institution, 1974.

*Phares, Donald. *Who Pays State and Local Taxes?* Cambridge, Mass.: Oelgeschlage, Gunn and Hain Publishers, 1980.

Phares, Donald. *State-Local Tax Equity*. Lexington, Mass.: Heath & Co., 1973.

★

School Finance Litigation

Alexander, Kern. "The Potential of Substantive Due Process for School Finance Litigation," *Journal of Education Finance*, vol. 6, no. 4, Spring 1981.

*Belsches-Simmons, Grace, "School Finance Litigation," *School Finance Reform in the States: 1983*. Denver, Colo.: Education Commission of the States, January 1983.

*Lawyers' Committee for Civil Rights Under Law. *Update of State-Wide School Finance Cases*. Washington, D.C.: Lawyers' Committee for Civil Rights Under Law, June 1982.

Levin, Betsy. *State School Finance Reform: Court Mandate or Legislative Action?* Washington, D.C.: National Conference of State Legislatures, July 1977.

Levin, Betsy. "Trends in School Finance Litigation," *School Finance Reform in the States, 1979*. Denver, Colo.: Education Commission of the States, July 1979.

★

Tax and Expenditure Referenda

Advisory Commission on Intergovernmental Relations (ACIR). *State Limitations on Local Taxes and Expenditures*, A-64. Washington, D.C.: U.S. Government Printing Office, 1977.

*Bradbury, Katherine and Helen Ladd. *Proposition 2½: Initial Impacts*, Project Report no. 82-A12. Stanford, Calif.: Institute for Research on Educational Finance and Governance, Stanford University, June 1982.

Brennan, Geoffrey and James Buchanan. "The Logic of Tax Limits: Alternative Constitutional Constraints of Power to Tax," *National Tax Journal*, vol. 32, no. 2 supplement, June 1979.

Courant, Paul, Edward Gramlich and Daniel Rubenfeld. "Why Voters Support Tax Limitation Amendments: The Michigan Case," *National Tax Journal*, vol. 33, no. 1, March 1980.

*Gold, Steven. "Is the Tax Revolt Dead?" *State Legislatures*, vol. 10, no. 3, March 1984.

Ladd, Helen F. "An Economic Evaluation of State Limitations on Local Taxing and Spending Powers," *National Tax Journal*, vol. 39, no. 1, 1978.

Ladd, Helen and Julie Wilson. "Education and Tax Limitations: Evidence From Massachusetts," Paper prepared at the Fourth Annual Research Conference, Association for Public Policy Analysis and Management, October 1982.

Ladd, Helen and Julie Wilson, "Why Voters Support Tax Limitations: Evidence from Massachusetts Proposition 2½," *National Tax Journal*, vol. 35, no. 2, June 1982.

*Palaich, Robert, James Kloss and Mary Williams. *Tax and Expenditure Limitation Referenda*. Denver, Colo.: Education Commission of the States, May 1980.

Shapiro, Perry et al. "Tax and Expenditure Limitations in Retrospect," *National Tax Journal*, vol. 32, no. 2 supplement, June 1979.

*Williams, Mary. "Earthquakes or Tremors: Tax and Expenditure Limitation Referenda and School Finance," in *The Changing Politics of School Finance*, Nelda Cambron-McCabe and Allan Odden, eds. Cambridge, Mass.: Ballinger Publishing Co., 1982.

★

Tuition Tax Credits

American Association of School Administrators. *The Effect of Tuition Tax Credits on Urban Schools*. Arlington, Va.: American Association of School Administrators, August 1982.

*Augenblick, John and C. Kent McGuire. *Tuition Tax Credits: Their Impact on the States*. Denver, Colo.: Education Commission of the States, October 1982.

*Frey, Donald. *Tuition Tax Credits for Private Schools: An Economic Analysis*. Ames, Iowa: Iowa State University Press, 1983.

Gaffney, Edward McGlynn Jr., ed. *Private Schools and the Public Good: Policy Alternatives for the Eighties*. Notre Dame, Ind.: University of Notre Dame Press, 1981.

*Institute for Research on Educational Finance and Governance (IFG). "Choice in Education: Are Tuition Tax Credits the Answer?" *IFG Policy Notes*, vol. 3, no. 1, Winter 1982.

Jacobs, Martha J. "Tuition Tax Credits for Elementary and Secondary Education," *Journal of Education Finance*, vol. 5, no. 3, Winter 1980.

James, Thomas and Henry M. Levin, eds. *Public Dollars for Private Schools*. Philadelphia: Temple University Press, 1983.

Kyle, Regina and Edwin Allen Jr. *Parental Choice of Education: A Literature Review of Significant Research*. Washington, D.C.: E.H. White and Co., 1982.

Raywid, Mary Anne. "Current Status of Schools of Choice in Public Elementary Education." Project on Alternatives in Education, Hofstra University, Hempstead, New York.

Williams, Mary Frase, Kimberly Small Hamcher and Amy Hutner. "Parents and School Choice: A Household Survey." School Finance Project Working Paper. Washington, D.C.: National Institute of Education, December 1983.

★

The Education Commission of the States is a nonprofit, nationwide interstate compact formed in 1966. The primary purpose of the Commission is to help governors, state legislators, state education officials and others develop policies to improve the quality of education at all levels. Forty-eight states, the District of Columbia, American Samoa, Puerto Rico and the Virgin Islands are members. The ECS central offices are at 1860 Lincoln Street, Suite 300, Denver, Colorado 80295. The Washington office is in the Hall of the States, 444 North Capitol Street NW, Suite 248, Washington, D.C. 20001.

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